The OIL and GAS JOURNAL
PRODUCING REFINING MARKETING

VOL. 21. No. 15 TULSA, OKLAHOMA, SEPTEMBER 7, 1922
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# New Pool North of Currie, Navarro County, Tex.

## Well Started at 4,000 Barrels. Creek County, Okla., Had Many Good Ones. New Pool in West of Haynesville, La.

By JAMES McINTYRE

Creek County, in Oklahoma, is one oil district where big wells may be looked for almost anywhere outside the old Cushing and Glenn Pools. In all the southern part of the big county, known as the Bristow field, and including 12 townships, or a territory 24 miles east and west and 18 miles north and south, the undeveloped pools are believed to be many, and at intervals through the year new productive spots are discovered. The Carter Oil Company opened one late last week in Section 13-16-10, the well starting at 70 barrels an hour from the Dutcher sand. The oil sand was drilled into just a few hours previous to the time of expiration of the lease and a little bad luck in drilling would have meant the loss of a property which is probably worth a fortune. The Red Bank Oil Company also opened a new pool in Creek County on the Ireland farm, Section 10-16-8, with a well reported by the company as a 500-barrel initial producer, the oil being of low gravity, while the well of Wilson and others in Section 29-15-10 is good for 500 barrels. The Waite Phillips Company has three new ones in the Continental Pool, Creek County, aggregating 1,800 barrels a day. These were No. 5 Jacobs, Section 22-16-9, starting at 800 barrels; No. 3 Micco, Section 23-16-9, good for 600 barrels, and No. 4 Houston, Section 26-16-9, 400 barrels. The Jomac Oil Company's No. 2-A Carr, Section 26-16-9, made an 800-barrel initial production. The Transcontinental Oil Company's No. 6 Looney, Section 26-16-9, opened up at 600 barrels, and Joe Abraham got a 900-barrel well. The Roland Oil Company's No. 3 Scott, Section 23-16-8, is making 700 barrels a day, and its No. 3 Deere, also in Section 23, started at 960 barrels a day, while the Prairie Oil & Gas Company opened up a 300-barrel producer in Section 23-16-8, and Dick Mason's big gasser in Section 23 drilled itself into a 300-barrel well. In the Burbank district, Osage County, the largest well of the week started at 895 barrels after a shot. It was the Sinclair Oil & Gas Company's No. 13 in Section 32-27-6. The Phillips Petroleum Company and Skelly Oil Company's No. 11, Section 25-27-5, was a 700-barrel well after a shot. There were a number of other good wells, but they did not come up to those above mentioned. In the Hominy district, Osage County, the Flesher Petroleum Company drilled deeper in its Mississippi lime gusher, drilled four months or so ago, and increased its production from about 1,000 barrels a day to 200 barrels an hour. It was drilled to the same level at which the Atlantic Oil Producing Company found a 10,000-barrel production, reported last week, and the latter well fell off to 190 barrels an hour when the Flesher Petroleum Company's well hit the same pay streak. In the Okemah district, in Okfuskee County, the Independent Oil Company has a new well on the Pigeon farm, Section 2-10-9, starting at 720 barrels a day. The Prairie Oil & Gas Company's No. 3 in Section 1-10-9 made a 300-barrel well. Okmulgee, Tulsa, Payne, Kay, Garfield and Noble Counties had reported nothing important up to the writing of this review, and the southern fields offered nothing sensational. A number of important tests scattered through Creek and Pawnee Counties were reported dry.

### North Central Texas

The North Central Texas fields showed a gain of 1,720 barrels a day in average production. The Electra Field had a gain of 2,565 barrels over the previous week. Operating in the various districts is done under the handicap of a shortage of water. A third sand was found in the K. M. A. Pool in Wichita County, the Prime Oil Company completing a well in sand at 1,620 feet that started at 200 barrels. The Pioneer Pool, and Eastland County generally, was unusually quiet the past week. The completions were small, as a rule, and there were not many of them. Pioneer production is falling off, but not alarmingly. It is proving itself a great potential casinghead gasoline region as there is 50,000,000 feet of dry gas being produced and the 73 oil wells are averaging 100,000 feet each of wet gas daily. It is estimated that the field has a daily production of 50,000 gallons of gasoline from the gas produced. In Stephens County, a 200-barrel well was completed by the Fensland Oil Company in the Eliasville district. Young County is one of the most active districts in the field. The Tuloma Oil Company's No. 1 Graham, 2 miles north of Herron City, is estimated to be good for several hundred barrels at 4,240 feet. The completions of the week include Ligon Oil Company's No. 4 Whittenberg, 125 barrels; Penn Cities Oil Company's No. 2-B Herron, 200 barrels; Simons and others' No. 1 Herron, 275 barrels, The wildcat counties did not develop any new pools, but drilling is going on as vigorously as the water situation will permit. A 200-barrel well is reported in Palo Pinto County, Hart Oil Corporation's No. 2 Hart, and in Archer County, The Texas Company got a 110-barrel well in No. 5 Chance.

### MID-CONTINENT PRODUCTION

**Estimated daily production of the fields of the Mid-Continent at the close of the past week was as follows: North Louisiana, 97,970 barrels; Arkansas, 29,740 barrels; North Central Texas, 140,060 barrels; East Central Texas, 83,850 barrels; Kansas, 87,700 barrels; Oklahoma—Cushing and Shamrock, 25,000 barrels; Healdton, 19,000 barrels; Hewitt, 26,900 barrels; Burbank, 71,107 barrels; Lyons-Quinn, 17,200 barrels; other pools, 253,000 barrels. Total, all fields, 851,527 barrels, a gain of 5,184 barrels in comparison with the preceding week.**

**The estimated daily production of heavy gravity oil in the Gulf Coast Field was 105,425 barrels.**

### North Louisiana-South Arkansas

While production of the North Louisiana and South Arkansas fields showed an increase of 4,000 barrels daily during the past week, the most important feature of the week was the completion of a 2,000-barrel producer in Webster Parish, Louisiana, which gives evidence of opening up a new oil pool. The well is located in the northwest corner of the southeast quarter of the southwest quarter of Section 34-23-11, midway between the towns of Sarepta and Springhill, and 14 miles west of production in the Haynesville district. It is known as Lloyd Harris' No. 3 Pine Woods Lumber Company and is the third of a series of wells, the first of which was drilled by the Castle Oil Company and abandoned as a dry hole at 3,271 feet. The second was taken over by Mr. Harris and was in the same section. It blew in with an estimated flow of 25,000,000 cubic feet of gas at 2,700 feet and had to be abandoned. The new producer found a rich sand at 2,710 feet, and at 2,713 feet, while running a bailer, the well started flowing at the rate of 3,000 barrels of fluid a day, approximately 33 per cent of which was salt water. The well was closed in, but flowed at the rate of 1,000 barrels a day when 2⅝-inch choker was set. Fourteen wells were completed in the Haynesville district during the week, all being producers, the production of the district showing an increase of 2,500 barrels daily. The Bellevue Field Showed an increase of 1,150 barrels daily, there being five completions in that field with one failure. Armistead and others completed No. 4 Strange, Section 23-19-11, it flowing 10 barrels at 295 feet. This is the first well that has been completed in Section 23 and marks a slight extension southeast of the proven area. The Gulf Refining Company brought in No. A-9 Bliss & Weatherbee, Section 15-19-11, it flowing 75 barrels at 360 feet. In the same section, the Humble Oil & Refining Company completed No. 2 Roy-Bliss & Weatherbee with an estimated production of 3,000 barrels of fluid, 60 per cent salt water and 38 per cent b.s., with nearly two feet of sand, at 395 feet. In the wildcat territory of Arkansas, the only completion recorded was the gas well brought in by the George & Jones Drilling Company in Ouachita County, its No. 1 Umpstead, Section 4-15-16, about 10 miles southeast of Camden, blowing in with an estimated daily capacity of 30,000,000 cubic feet of gas.

### East Central Texas

Kosse, Limestone County, Texas, will have a townlot drilling campaign. A half-dozen locations have been made for wells there since the Humphreys Oil Company drilled into gusher production on the Jones farm, near the town. The big well is shut in entirely and it may be two or three weeks before sufficient tankage can be completed to take care of the production. Meanwhile, the Humphreys Pure Oil pipe line is being rushed to the new field. Large prices are being paid for acreage surrounding the big 6,000-acre block of the Humphreys Oil Co. and others. The most important well of the week in the East Central Texas fields was Seay & Cranfill's No. 2, north of the town of Currie, in Navarro County, which was reported to have started at 4,000 barrels a day and later reported at 1,500 barrels a day. It is cut off from the known Currie Pool by dry holes. Completions in the Mexia district were of the routine order.

### Gulf Coast

The Hull Field, in the Gulf Coast district, distinguished itself in the course of the week with a brace of big wells. The Gulf Production Company's No. 31 on the Phoenix Development Company's land started at 4,100 barrels and later settled to 3,000 barrels. The Republic Production Company's No. 2 Hanna is a 2,500-barrel well. In the West Columbia Field, the Humble Oil & Refining Company's No. 3 Williamson resumed flowing, making 800 barrels of oil and a vast amount of water. In the Orange district, the Humble Oil & Refining Company's No. 1 Carbello was flowing 1,500 barrels; same company's No. 16 Chesson, 210 barrels.

### California

Active development work at Long Beach and Santa Fe Springs, in California, has diverted inter-

(Continued on Page 22)

Table of Contents on Page 72

The Oil and Gas Journal
PRODUCING REFINING MARKETING

Published Weekly by
THE PETROLEUM PUBLISHING COMPANY
114-116 West Second Street
TULSA, OKLA.

Established as an International Publication in 1910 by Patrick C. Boyle

President - - - - - - - - - - - Frank T. Lauinger
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TERMS OF SUBSCRIPTION
(By Mail, Postage Prepaid)

| | |
|---|---|
| Single copies | $ .15 |
| Three months | 2.00 |
| Six months | 3.00 |
| One year (in United States) | 6.00 |
| One year (in Canada) | 7.00 |
| One year (foreign countries) | 7.00 |

ADVERTISING RATES ON APPLICATION
Remittances by Checks, Drafts, Express or Postal Money Orders should be made payable to
The Petroleum Publishing Company
Cable address, "Oilgasnal"
Telephones Osage 1930—Osage 7538

MEMBER AUDIT BUREAU OF CIRCULATION

## WHAT GOOD WILL IT DO?

Henry Ford has furnished the press much front page copy by the announcement that on September 16 he will shut down his automobile plants. According to interviews that Mr. Ford has very generously granted representatives of the various news services, his action is a warning to the coal and steel interests that the Ford organization will not pay the increased price for these products and thereby become a party to gouging the public.

Advice emanating from Ford headquarters states that this company is able to secure an unlimited quantity of coal provided it is willing to pay bootlegging prices, despite the fact that the Government, through Secretary Hoover, has declared that the public will be protected from profiteers.

These charges made by Ford are grave and should be sifted to the bottom. Secretary Hoover and the Attorney General's Department should demand an immediate and thorough investigation and Mr. Ford should come forward and put his cards on the table.

The advance in steel prices, which Mr. Ford is understood to resent, is a much simpler question. The United States Steel Corporation is not and has never posed as an eleemosynary institution. It has heavy unfilled orders and to secure the requisite amount of labor advanced wages recently 20 per cent. This is now being reflected in higher steel quotations. The corporation, at the time of the wage advance, made it clear that the increase should not be construed as having national significance.

Since his first announcement of a shut-down, Ford has reiterated that the decision to suspend operations is unchanged, and further supplemented it by declaring that he was unwilling even if the price were right to use coal needed to keep men, women and children warm during the coming winter.

Such lofty-minded sentiment is highly commendable. Mr. Ford is to be congratulated on occupying such an enviable position industrially as to be able to apply such humanitarian principles to his business. He, in all probability, is the only captain of industry in this country who occupies the position of not having to consult any board of directors, bankers, etc., in regard to policies. Unfortunately, general industry is in such a position that it cannot afford to declare a cessation of operations at a moment's notice.

While, as pointed out at the beginning, Mr. Ford's action will furnish much matter for Sunday feature stories, viewed from its effect upon economic and industrial conditions, it is of little consequence. It is probably a wise move from the standpoint of the Ford organization. Ford has revolutionized and given the country a new idea of quantity production. In turning out automobiles and tractors on a per volume, small profit scale he is supreme.

The oil industry is sorry to see Mr. Ford's plant shut down. Every flivver put into commission consumes in the neighborhood of seven gallons of gasoline per week. It is to be hoped that Mr. Ford will find some more effective method of combating the conditions of which he complains than the closing of his factories, which will only mean the throwing out of employment of thousands of men at the beginning of winter.

If Mr. Ford's action is in the manner of a reprisal against the steel and coal industries, it is ill advised. There never was a time when the steel and coal interests cared less about the Ford business than the present time. Both industries have more tonnage than they can possibly fill, consequently the shut-down in this direction will have little effect.

The public generally is just as vitally interested in checking any profiteering tendencies as Ford. It is unthinkable that the Government will not remedy conditions if they are actually as he portrays. However, when Mr. Ford arbitrarily says what he will pay for coal or steel and declares unless he can get his requirements at that figure, he will shut down, his attitude is very much that of a sulky child who refuses to play unless he can make the rules of the game.

## RUSSIAN OIL SITUATION

The oil industry of the United States, so far as it has taken an interest in the progress of production of petroleum in Russia since the close of the World War, will be surprised to learn that in the Grosny district there has been an actual increase of production since 1913. The Grosny Field is running at about 7,000,000 poods per month, or approximately 780,000 barrels, whereas in the year 1913 the annual production was about 73,700 000 poods, or about 8.000,0000 poods less than the present rate of production per annum.

It will be recalled that there was practically no destruction of wells in the Grosny district. In the Baku Field where the destruction of wells was very great during the war, the present production is only about one-third of that of 1913, the annual production in 1913 being 470.000,000 poods.

We have no information that the Soviet Government has any intention to restore to foreign oil companies the properties it has confiscated. A recent news dispatch to the effect that the Soviet Government had agreed to reimburse an English company for its oil property has not been confirmed by any information of a reliable source that it has ever adopted that course.

One of the very interesting indications of the course the Government is following is contained in a copy of the publication of the Soviet Government in London, dated May 15, called the Russian Information and Review, which states that a plan has been adopted for the formation of shares companies by which the former owners will be given preferential rights to put in capital for the production of petroleum, the Government to put in as its share the properties formerly belonging to these owners, the government to hold a majority of the stock. In other words, for its majority of the stock of such companies the government will contribute the property it has confiscated from the men who are invited to participate in the new venture. In fact, any one who has capital is invited to come into such an agreement, but it is made clear that as a matter of fairness the former owners of the confiscated property will be given preferential rights.

In official circles in the United States there is doubt first whether the Soviet Government is ready to play fairly with the former owners of the confiscated property and secondly, whether it will keep any new agreements that may be entered into.

However, several mixed companies of the kind referred to have been formed by direct negotiation with foreign groups and a number of similar schemes are nearing their final stages of negotiation. The Oil and Gas Journal believes that no Government outside of Russia will approve these plans, as all the leading Governments whose nationals have petroleum interests in Russia have signified their disapproval of any plan for readjustment that does not contemplate the restoration of property to its former owners. It is not known that any Americans have invested any capital in any of these schemes for the formation of new oil companies of the kind indicated and if they should do so, it is not likely that they will ever receive any support from our Government should they come to grief.

Some small groups of Americans have taken over concessions to work asbestos deposits in Russia, but their names are not familiar to the general public here. One of these companies is known as the General Chemical Company. None of them is concerned with oil.

Some groups of miners and laborers have gone from the United States to Russia to mine coal in Siberia and a number of Chicago tailors have gone to Russia to start a clothing factory in Moscow. These miners and tailors have not carried capital to Russia but appear to be Socialists who wish to work in with the prevailing ideas of the Soviet Government.

The reports received by The Oil and Gas Journal respecting industry generally in Russia do not indicate that any other activity has increased output such as has been shown in the Grosny oil fields. Many of the industries, according to information coming from Soviet sources, are turning out only about 5 per cent of the pre-war output and it may well be believed that industrial conditions are becoming worse instead of better, the prospect for large agricultural crops being the only favorable news that has reached here.

## THE REFINER'S OPPORTUNITY

Large oil companies are receiving hundreds of inquiries concerning the conversion of coal burning boilers to oil firing, for generating steam in manufacturing plants and for heating residences. These inquiries have been occasioned by the shortage of coal because of the long strike.

What is the refining industry doing to make opportunity out of the coal man's extremity? So far as The Oil and Gas Journal can learn, the industry is not centering its efforts on this new potential market, which might be made nation-wide. The Standard Oil Company may be depended upon to make the most of its opportunity of creating a vast new market, as it did when kerosene stoves came into use and that company very promptly brought out and widely advertised its Perfection Oil Heater, but the independent refiner has his work cut out for him if the use of oil burners in private homes is to become general.

Inventors are at work on fuel oil burners. Some of them are turning all their ingenuity to developing safe and sane burners for residential use. Already announcements have been made that such burners are, or soon will be, on the market.

The refiner not only must encourage and assist the inventor, but must interest the jobber and the local filling station owner, so that there will be co-operation down the line from refiner to consumer.

If the home-owner is to equip his residence with oil burners and distillate containers, he must be assured of a quick source of supply at a price that will be attractive enough to retain him as a customer. Thus far there is no general co-operation, nor is there any great effort being made to hasten the day when a demand for fuel oil upon the filling station man can be promptly met.

The recent movement toward fuel oil in homes might be converted by the oil industry into a great, permanent and stabilized business, which would mean a dependable source of income through the years. But it may become weak and fall by the wayside unless the industry pushes it along to its finality.

# Giants Fight for Asiatic Oil Supremacy

## British Interests Have Upper Hand at Present but the Standard is Fighting for a Hold Having Had Pre-War Rights

By N. O. FANNING

Asia Minor has not yet proved itself to be a country that will produce oil in large commercial quantities, yet the eyes of the petroleum industry throughout the world have been riveted on this region since the war. Political developments have been watched closely, and to all appearances there has been a bitter struggle, under the surface, among various petroleum companies to gain the upper hand and acquire concessions there.

Among the foreign companies, the most prominent to figure in this clash have been the Anglo-Persian Oil Company and the Royal Dutch-Shell. It must be admitted that British interests have the whip hand at present. The territory under discussion has been unsettled since the close of the World War. Having been released from the domination of the Turk, it has fallen temporarily, at least, under British rule, this nation having been awarded a mandate over it.

The San Remo agreement called for the division of prospective oil territories in Rumania, Asia Minor and Russia, acquired by Great Britain and France since the close of the war, on a mutual basis, each of the two nations supplying an equal amount of capital for their development. It is understood that a company was formed to operate in Mesopotamia and Palestine, in which the Anglo-Persian Oil Company, the Dutch-Shell and a French company were represented.

The principal American company to take an active interest in concessions in Asia Minor was the Standard Oil Co. of New York, which had acquired rights from the Turkish Government prior to the outbreak of the World War in 1914. These rights are understood to have included a pipe line concession from Mesopotamia to the coast of Palestine, terminating at Beirut.

It was recently announced that the Standard Oil Company had reached some agreement regarding a concession in Palestine with the British authorities. Just what this agreement is cannot be stated. The parties interested have steadfastly refused to make any announcement, and the real situation remains shrouded in the mystery which has always surrounded petroleum affairs in the Near East.

One thing is known, however, and that is that the British interests regard that part of Asia Minor comprising Palestine and Mesopotamia as of great importance, not only because of its oil possibilities, but also its strategic importance with relation to Persia, where a big oil field is being developed by the Anglo-Persian Oil Company. These Persian fields are cut off almost entirely from Europe, the principal means of transportation being by water through the Suez Canal, involving a trip of more than 3,000 miles from the oil refinery at Abadan to the Mediterranean Sea. Yet it is only 1,000 miles as the crow flies from this port to Beirut, on the Mediterranean, across Mesopotamia and Palestine.

It is at once apparent that a pipe line built from Abadan to Beirut to carry oil from the Persian fields would effect an immense saving, not only in time, but in expense.

### Pipe Line Concession Key

It is the concession for such a pipe line that comprises the real key to the oil situation in Mesopotamia, for this pipe line could not only carry Persian oil, but would also pick up oil from any fields which might be developed in the countries it would pass through. Such a pipe line in the hands of a competitor of the Anglo-Persian Oil Company would postpone for some time the competition of cheaper Persian oil in the European markets—surely until a new way of bridging the gap of Mesopotamia and Palestine could be found.

If the Anglo-Persian were to get the concession—or even the Dutch-Shell group, which would be likely to conclude working agreements with the former for the use of the pipe line—and succeeded in building the pipe line, the prospects of large production of oil in Persia are so bright that it might enable that company to invade the rich European markets on a scale to threaten the present ascendancy of American oil.

Such a possibility clearly indicates the strategic importance of Mesopotamia and Palestine to oil interests, such as Standard Oil, Dutch-Shell and Anglo-Persian, and also points to the real reason behind the recent American protests against England's tendency to exclude foreign interests from the mandated territories.

### Agreement Throws Light on Situation

The most illuminating document on the Mesopotamian situation which has yet been made public, is the Anglo-French Oil Agreement of 1920, which followed the San Remo conference. In regard to Mesopotamia, the agreement stated:

"The British Government undertakes to grant to the French Government or its nominee 25 per cent of the net output of crude oil at current market rates which it may secure from the Mesopotamian fields, in the event of their being developed by Government action; or in the event of a private petroleum company being used to develop the Mesopotamian fields, the British Government will place at the disposal of the French Government a share of 25 per cent in such company. The price to be paid for participation is to be no more than that paid by any of the other participants to the petroleum company. It is also understood that the petroleum company shall be under permanent British control.

"It is agreed that, should the private petroleum company be constituted, the native Government or other native interests are to be allowed, if they so desire, to participate up to a maximum of 20 per cent of the share capital. The French are to contribute one-half of the first 10 per cent of native participation and the additional participation is to be provided by each participant in proportion to his holdings.

"The British Government agrees to support arrangements by which the French Government may procure from the Anglo-Persian Oil Company supplies of oil, which may be piped from Persia to the Mediterranean Sea through any pipe line which may have been constructed within the French mandated territory and in regard to which France has given special facilities, up to the extent of 25 per cent of the oil so piped, on such terms and conditions as may be mutually agreed between the French Government and the Anglo-Persian Company.

"In consideration of the above-mentioned arrangements the French Government agrees, if it is desired and as soon as application is made, to the construction of two separate pipe lines and railways necessary to their construction and maintenance and for the transport of oil from Mesopotamia and Persia through French spheres of influence to a port or ports on the eastern Mediterranean. The port or ports are to be chosen in agreement between the two Governments. Should the pipe line and railways cross territory within a French sphere of influence, France undertakes to give every facility for the rights of crossing without royalty or wayleaves on the oil transported. Nevertheless, compensation is to be payable to the landowners for the surface occupied.

"In the same way France will give facilities at the terminal port for the acquisition of the land necessary for the erection of depots, railways, refineries, loading wharves, etc. Oil thus exported is to be exempt from export and transit duties. The material necessary for the construction of the pipe lines, railways, refineries and other equipment also to be free from import duties and wayleaves. Should the petroleum company desire to lay a pipe line and a railway to the Persian Gulf the British Government will use its good offices to secure similar facilities for that purpose."

### American Company's Claim

It is understood that the claim for a concession in Mesopotamia put forth by the Standard Oil Company of New York was based on a grant of the Turkish Government prior to the outbreak of the World War. This grant provided for the construction of a pipe line and all the facilities needed to handle whatever oil might be brought to the surface. Great Britain, which holds a mandate over Mesopotamia by virtue of an agreement among the Allies following the war, to which the United States was not a party, is understood to have based the claims of its nationals on the contention that the original grant was made to a German company, and was purchased by a British-French corporation after the war, along with German oil holdings in Rumania and other European countries.

That oil exists in Mesopotamia is the belief of prominent geologists. Sir John Cadman, technical adviser of the Anglo-Persian Oil Company, and the director of Britain's oil activities during the war, said of this country in 1920:

"The oil fields of Persia are now well known and established, and although only some 1,500,000 tons per annum are being produced, the potential source of this area is prodigious, and a very large output may be expected. Very little is definitely known of Mesopotamia, although it is believed that the geological conditions are dissimilar from those of Persia, and that an important source of production may be anticipated from this territory. Surface indications of oil have been found in Palestine, and this territory is likely to come under practical examination at an early date."

### Oil Men Watch Outcome

It is apparent that that portion of Asia Minor lying directly between Persia and the Mediterranean Sea contains an extremely promising oil area, and that the rival interests there will exhaust all means before giving up their various claims. Despite reassuring statements emanating from London, the American public which studies international affairs will be interested to see just how the American companies come out, and particularly as to whether they succeed in obtaining the valued pipe line concession across this promising territory.

The outcome may go a great way toward deciding the question of supremacy between American and foreign oil interests in Europe's rich petroleum markets in the years to come.

## COLONEL HUMPHREYS' POSITION

While at this writing the Humphreys Oil Company's recent completion at Kosse, Tex., is shut in and not producing, the opinion is general that it has opened a large producing area. Therefore, the statement of President Humphreys that in view of the existing crude situation, the company would keep down production as much as possible, was received with satisfaction. It will be necessary to drill two offsets to the new well on the Jones farm, but no other wells will be started on the 6,000-acre tract unless outside operators complete the drilling of offsets on the edge of the Humphreys acreage. Colonel Humphreys' position is taken despite the fact that the entire output of its producing properties in Texas is sold under contracts, 50 per cent going to the Sinclair-Standard interests and 50 per cent to the Pure Oil Company at a price of $1.50 a barrel. In as much as these contracts provide for a delivery of 60,000,000 barrels, if and as produced, the situation in the crude oil market does not directly affect the income of this company.

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# MEN KNOWN IN OILDOM

J. W. SLOAN

Throughout the Southwest and many other points the name and personality of J. W. Sloan is synonymous with the Oklahoma Iron Works and the Oklahoma Tool & Supply Company, the latter company being part of the sales organization of the former. The subject of this sketch was born at Allegheny City, Pa., in 1870. After spending his boyhood in Clarion County, Pennsylvania, he went to work in the oil fields of that State when a youth of 16 years.

In 1898, Mr. Sloan went to Corsicana, Tex., as head of the Corsicana Refining Company. Later he went to Beaumont, where he became vice-president and general manager of the Producers Oil Company., afterwards absorbed by The Texas Company.

After his extended experience in the practical producing, Mr. Sloan first entered the supply end of the oil business when, in 1900, he organized the Sour Lake Tool Company. He brought this concern with him when, in 1903, he came to Cleveland, Okla. The supply company was reorganized under the name of the Cleveland Tool Company. In 1907 the present Oklahoma Iron Works had its beginning when the Cleveland plant was moved to Tulsa. Oil men generally know what success has crowned Mr. Sloan's efforts during the last several years and the part his two organizations play in the oil business of the Southwest. In addition to the organizations mentioned, Mr. Sloan is still identified with oil operations as a producer. He is a large real estate owner in Tulsa, where he also is known as one of its most public spirited citizens.

# PERSONAL PARAGRAPHS

James D. Berry, president of the James B. Berry's Sons Companw, of Oil City, Pa., has been at the Chicago office of the company recently.

* * *

Frank Collins, vice president of the National Supply Company, of Toledo, Ohio, is on his annual fishing tour in northern Michigan.

* * *

J. W. Carnes, vice president in charge of sales for the Sinclair Refining Company, is away from the Chicago office on an Eastern trip.

Judge F. W. Freeman, of the Denver, Colo., office of The Texas Company, spent several days of last week at the Casper offices of the company.

* * *

L. L. Oppenheimer, sales manager of the Sapulpa Refining Company, of Sapulpa, Okla., was in Chicago and other points in that section last week.

* * *

J. C. Robinson, superintendent of the Texas Pipe Line Company, Drumright, Okla., with his family is visiting his father, Thomas Robinson, at Sarnia, Ont.

* * *

J. S. Cosden, president of Cosden & Company, is reported rapidly recovering from a recent operation performed at Saratoga Springs, N. Y., for appendicitis.

* * *

George H. Taber, president of the Sinclair Crude Oil Purchasing Company, of Tulsa, is at the bedside of his mother, who is ill at her home in Pittsburgh, Pa.

* * *

W. J. McCulloch, general manager of the Independent Oil & Gas Company, is in Colorado, where he will stay for several weeks. He expects to spend the winter with his family.

* * *

E. E. Grant, of the National Petroleum Marketers Association, has returned to the Chicago office, after attending a meeting last week of the South Dakota Oil Marketers Association at Watertown, S. D.

* * *

A. T. Alison, vice president of the Exchange National Bank, of Tulsa, Okla., was a tourist through Wyoming the past week, stopping at Casper for a few days on his way to the Yellowstone Park.

* * *

Ira Neeley, of Wooster, Ohio, of the Medina Gas & Fuel Company, was host last week to several oil men on a vacation at Lake Nipissing, Canada. Mr. Neeley yearly stages a houseboat fishing trip to the lake for his friends.

* * *

Joseph Cudahy, president of the Sinclair Refining Company, has returned to the Chicago office of the company, after a trip to Eastern points. W. H. Isom, chairman of the board of directors of the company, has left on a two months' vacation.

* * *

Allen Jackson, vice president, and in charge of sales for the Standard Oil Company of Indiana, has been elected a director in the new athletic club of Chicago. The club has announced plans for the erection of a $3,000,000 athletic club on Lake Shore drive.

* * *

F. M. Blehr, of the Casper, Wyo., office of the Bureau of Mines, is spending a vacation at his former home in Minnesota. R. C. Patterson, in charge of the Casper office, and B. H. Carnahan left last week on a cross-country trip on Government business.

* * *

G. I. Hurlebaus, for a number of years connected with the Government in various capacities, has accepted a position with The Texas Company at Casper, Wyo. Mr. Hurlebaus for several years was connected with the producing department of the Bureau of Mines.

* * *

George Sawyer, formerly field manager for the English interests in the Dallas and Derby Fields, Wyoming, passed through Casper, en route to Argentine, South America, where he will have charge of the tools of an English syndicate that is exploring that region for petroleum.

* * *

A. C. Bean, of the Tnemec Paint & Oil Co., of Kansas City, Mo., spent several days recently at Casper and other points in Wyoming and Montana. He was accompanied on his trip by district officials of the Continental Supply Company, agents for the products of the Tnemec Company.

* * *

Leland V. Stanford, vice president of the Union Petroleum Company, in charge of the light oil export department, arrived in Tulsa the latter part of last week from the Philadelphia office. Mr. Stanford is making a visit which has or will cover the principal oil centers of the Southwest.

Guy Forcier, president of the Lakeside Refining Company, subsidiary of the Maguire Petroleum Company, was at the Chicago office recently. The Lakeside Company is operating a refinery at Augusta, Kans. The plant has been repaired and new equipment installed, including a cracking process.

* * *

Ralph Watson, general superintendent of production, and Frank McKnight, superintendent of operations in Wyoming for the Transcontinental Petroleum Company, spent part of last week at Casper, Wyo., and Salt Creek Field. The company is preparing to drill a test near Thermopolis, Wyo.

* * *

A. H. Jones, of Pittsburgh; E. C. Eddy, of Detroit, and D. Hackenjos, of Tulsa, were among the district managers of the Johnson Oil & Refining Company which attended a meeting at the Chicago office of the company recently. Homer Johnson, president of the company, returned to Tulsa with Mr. Hackenjos.

* * *

Business is good, according to W. K. Evans, manager of the Chicago office of the Roxana Petroleum Company, who has returned from a trip East. He reports that the demand for fuel and road oils is so strong that the Roxana, Ill., plant of the company is practically running fuel and road oils direct from the stills to the tank cars.

* * *

The present shut-down movement in the oil fields is the tightest he has ever seen, according to D. F. McCarty, manager of the Mid-Continent district for the Parkersburg Rig & Reel Company, who has returned to the Tulsa office, after an inspection trip of company stores throughout Oklahoma. The shut-down movement, according to Mr. McCarty, augurs well for the oil business during the coming year.

* * *

E. E. Schock, president of the Indiahoma Refining Company, left Tulsa last week for Battle Creek, Mich., to spend a vacation. Mr. Schock recently made a thorough investigation of conditions within the oil industry from visits to widely scattered sections. He reports conditions most favorable and predicts that a shut-down in present drilling activities will see a quick return to favorable crude markets.

* * *

Oil men returning from vacations are vieing with one another in telling fish stories. To date, however, C. B. Goddard, of the Humble Oil & Refining Company, at Ardmore, Okla., who has just returned from a month's vacation in Wyoming and Colorado, has bested all competition, so far as is known. It is claimed that Mr. Goddard caught 600 fish in one day in a lake near Colorado Springs, Colo., which was recently opened to fishermen.

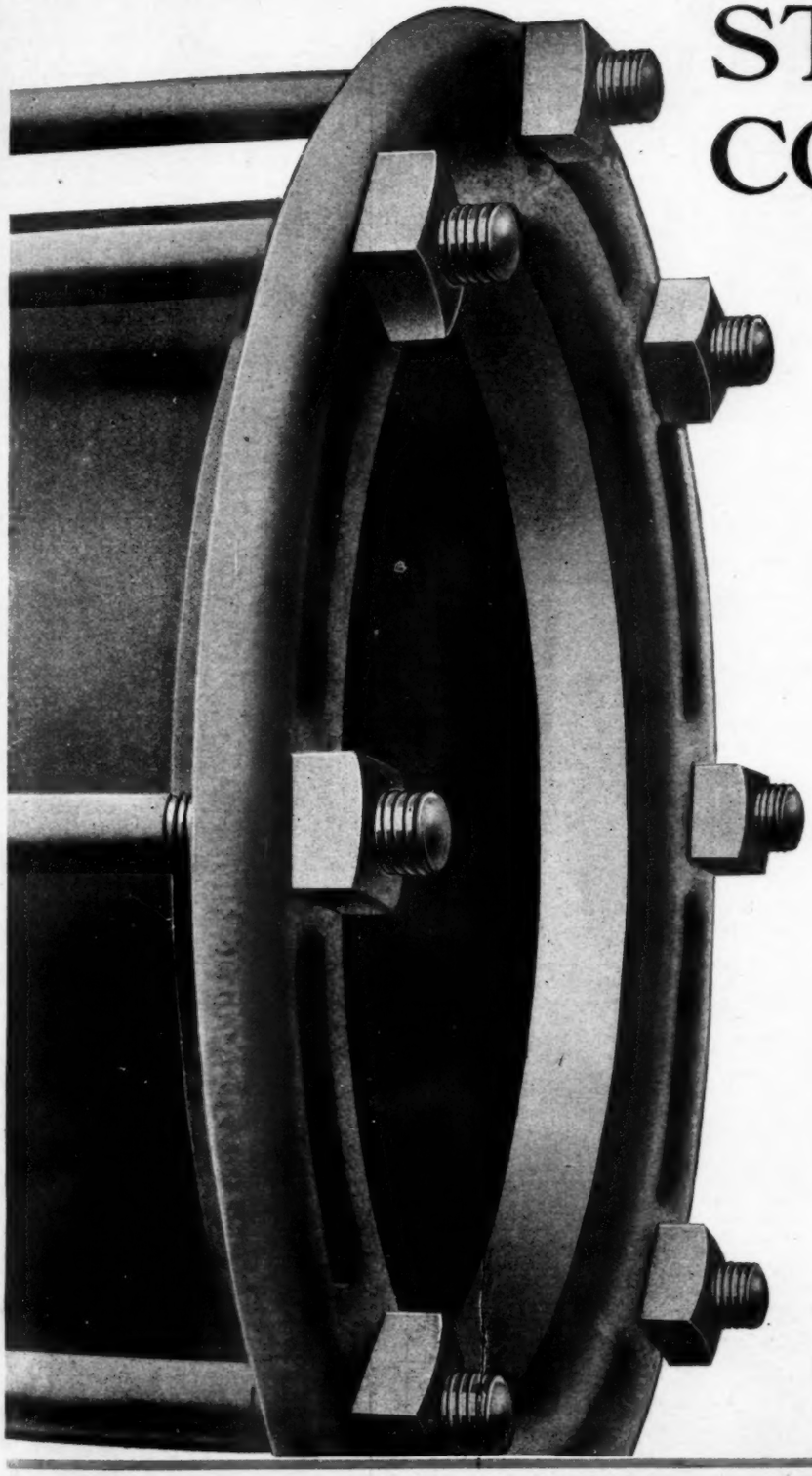
* * *

Mexico is "a hard country and a hard people," according to Captain Jack Fisher, who has returned to Chatham, Ont., after spending 14 months in that country. The observation is all the more interesting due to the fact that he was engaged in several of the major battles of the late war. He also says that "bandit hold-ups are a common occurrence. They invariably shoot the field superintendent of each camp, for under Mexican law, his evidence is the only testimony bearing any weight." Accompanied by George M. Patrick and T. Dickerson, of Chatham, Ont., he will leave soon for Mesopotamia, where he will be connected with the Anglo-Persian Oil Company.

* * *

J. S. Mechling, who for many years has been the head of the Oil Well Supply Company's headquarters at Casper, Wyo., is to be transferred to another section, according to an announcement made last week. Mr. Mechling is considered one of the veterans in the oil business of Wyoming and surrounding territory. He went to Casper 12 years ago when oil in that region was practically confined to hopes and Casper was a cow town. Never doubting the oil possibilities of that section, Mr. Mechling did everything possible to encourage operators and to him, probably as much as to any other one individual, belongs credit for the present status of Wyoming oil development. It is understood that he will be a Western manager for the Oil Well Supply Company, with which he has been connected for 26 years.

# DRESSER



## STEEL PIPE COUPLINGS

*The Standard Joint*

**Dresser Steel Pipe Coupling Style 38 has been adopted generally in all fields for either high or low pressure work. It is used on every type of Plain End Steel Pipe and Plain End Cast Iron Pipe in all sizes from ½" up.**

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## DRESSER-COUPLINGS-DOMINATE

# Recent Development of Fuel Oil Burning

## Superiority of Petroleum Product Over Coal in Results and Economy of Operation is Steadily Being Demonstrated

By Ralph I. Condon
*Engineer, Peabody Engineering Corporation, New York City*

New York, Sept. 1.—The present coal situation has been the cause of widespread interest in the burning of fuel oil, and the public is beginning at last to wake up to its great possibilities. During the past month manufacturers of oil-burning equipment in the East have received more inquiries from coal users regarding conversion to oil than during the whole preceding year.

The writer will attempt in this article to give a brief outline of the history of oil burning, its development and present fields, and reasons why it is so rapidly replacing coal burning.

The first attempts to use oil as fuel took place during the early part of the 19th century. The devices used generally consisted of open pans or troughs through which the oil flowed, combustion taking place at its surface. At times wicks were employed, as in a kerosene lamp. Such combustion was necessarily quite slow and imperfect and was not used for steam generation, but only for heating purposes. About 1825 a patent was issued for a device which sprayed oil into a furnace on to highly heated clay cylinders, which aided combustion. This was the first step toward the mechanical burner of our time. It was not until 1890 that a satisfactory burner was developed, able to compete in every way with coal. From this time up to the present, inventors have made rapid strides in this line, and today there are hundreds of types of burners being used in this country alone.

The oil originally used in burners was crude oil, practically as it came from the well. This was both expensive and dangerous, as the oil contained highly inflammable and valuable products. The commercial fuel oil of today is the residue left after the gasoline, kerosene, naphtha and lighter oils have been distilled off from the crude. It is a heavy, viscous oil, capable of being heated to a high temperature before inflammable gasses are given off, and therefore perfectly safe.

### Three General Types

There are at present three general types of oil burners or atomizers: Steam, air and mechanical.

In the steam burner, atomization is effected by mixing steam with the oil in a specially designed tube or sprayer, the steam breaking up the oil jet into a fine, misty spray. This type of burner has the advantage of using oil at a low pressure and may be applied to a coal-burning furnace with but few changes in the boiler setting. Its disadvantages are that it is quite wasteful, the steam used for atomizing being blown up the stack, and requires careful operation to keep this loss at a minimum. The loss amounts anywhere from 3 to 6 per cent of the total steam generated. This latter consideration prohibits the use of steam burners on ship board, where fresh water is at a premium. This burner is particularly suited for certain uses, such as in kilns and retorts.

Atomization with the air burner is accomplished by means of highly compressed air, acting on the oil jet in a manner similar to steam. Due to the cost of compressing the air, and the necessary expensive machinery, the field for the burner is limited to smaller industrial furnaces for glass making, annealing, etc.

The mechanical burner is supreme in almost every field, in the opinion of the writer. The oil is supplied to the burners by pumps at a pressure of from 100 to 200 pounds per square inch. At the burner end or tip, the oil is forced through tangential or spiral grooves, which give it a rapid motion, and as the oil emerges from the tip orifice, centrifugal force throws the oil out into a conical, misty spray. The air for combustion is supplied through an air register, which is merely a metal cylinder surrounding the burner tube, with adjustable doors to regulate the air supply. The steam used for pumping and heating the oil amounts to about ½ of 1 per cent, so this burner is considered by far the most economical type so far developed.

### Superiority Over Coal

Having discussed types of burners, let us now investigate the reasons for their superiority over coal firing. These may be enumerated as follows:

1. Cleanliness; lack of smoke and soot. This is particularly advantageous in cities which have smoke ordinances, and also in certain special installations, as in laundries and textile mills.
2. No ashes to be disposed of.
3. Large cut in labor required. In place of a large force of firemen and coal passers, there are one or two capable men to handle the entire mechanical pumping and heating system.
4. Ease of operation. The handling of a few valves and a little careful watching of the burners takes the place of a lot of backbreaking labor.
5. Flexibility. All fluctuations in the load on a boiler can be met instantly.
6. High capacities. Boilers burning fuel oil can easily be forced to generate three times as much steam as the normal rating of the boiler.
7. Storage. Oil can be stored in a buried tank, or on shipboard in double bottoms or space which would ordinarily be wasted. Due to the higher heat value of oil, pound per pound, a ship could steam much further with oil than with the same weight of coal.
8. Efficiency. A much higher boiler efficiency can be obtained with oil, and more perfect combustion.

The above are only a few of the major advantages of oil over coal. When a coal user contemplates changing his plant to burn oil, he must be impressed by the above considerations. And, probably the most important question to him is: "How can I save by changing over?"

### Economy in Changing Over

I will try to explain how this question is customarily answered, in a non-technical way.

For example, suppose we have a plant that uses 30 gross tons of coal per day at $7 per ton. The fire room force consists of 15 men at $30 per week each. Ash handling costs $100 per month. We can assume a boiler efficiency of 63 per cent which is a fair average for coal and a heat value of 12,500 B. T. U. per pound of coal. The weekly costs with coal would be:

| | |
|---|---|
| Fuel (7×30×7) | $1,470 |
| Labor (15×30) | 450 |
| Ash disposal | 25 |
| Total per week | $1,945 |

With oil we figure an efficiency of 78 per cent and a heat value of 18,500 B. T. U. per pound and a cost of 4 cents per gallon. The number of pounds of oil equipment to a long ton of coal would then be 63/78×12,500/18,500×2,240=1,222 pounds=152 gallons per ton. Costs with oil would then be:

| | |
|---|---|
| Fuel (7×30×152×.04) | $1,277 |
| Labor (3×30) | 90 |
| Total per week | 1,3,67 |

The weekly saving would be $1,945—$1,367=$578. or a yearly saving of 52×$578=$30,056.

Assuming the initial cost of installation to be $90,000, the installation would pay for itself in three years and constitute a large saving thereafter.

### Question of Supply

Many engineers are skeptical regarding oil burners because they say that the end of the oil supply is in sight. In answer to this I would say that while the present world supply of oil in sight is only sufficient for 20 years at present rate of consumption, according to estimates of the most conservative geologists, who can venture to put any limit on the potentialities when the principal oil companies of the world are busy opening up apparently vast resources all over the world? Witness the discoveries of oil in Venezuela, Colombia, Bolivia, Argentina, Canada (Fort Norman) and actual development work now going on in these countries, to say nothing of recent increases in production of Persia and the East Indies, which indicate potentialities. Early exhaustion of oil fields has been predicted for 50 years. It is no new thing. There is no better reason to believe in it now than there was half a century ago.

There are no end of satisfied fuel oil users in the East, among them being represented some of the largest industrial plants and office buildings in the world. A few of the users in New York include such large and nationally known department stores as Macey's, Hearn, McCreery's and others. The Pilgrim Steam Laundry, with the largest plant in the city, burns oil. The Amoskeag Manufacturing Co., of Manchester, N. H., the largest textile mill in the world, is now burning oil under 64 boilers. The American Sugar Refining Co., of Boston, has an immense oil burning installation. All of the above plants have been operating continuously with no trouble and with boiler efficiency well over 80 per cent. I might also mention that the greatest transatlantic passenger steamships in the world are now burning oil, and the number of smaller oil-burning vessels is legion.

There are five distinct fields for the use of oil burning equipment, as follows:

First, for marine purposes. Here the supremacy of oil-burning equipment is firmly established, and the coal burner is getting to be the exception, rather than the rule.

Second, for industrial purposes, such as glass and china furnaces, melting and annealing furnaces and in various manufacturing processes, but not for steam generation. The burners are generally air burners or low pressure mechanical atomizers.

Third, and by far the largest field, is the use of oil burners for steam generation in stationary boiler plants (such as the American Sugar Refining installation shown in the accompanying photograph). Both steam and mechanical atomizers have met with great success in this field, and many refinements have been introduced into the oil burning systems, such as automatic control, and the use of instruments which tell at a glance what the boiler plant is doing.

Fourth, for locomotives. Freedom from soot and smoke, and less stopping for fuel, make oil burners most desirable for this class of service. The absence of sparks from the stack prevents disastrous forest fires where the railroad is built through vast wooded tracts.

Fifth, and this is a field which is considered potentially the greatest of all, is the burning of fuel oil for household purposes, including heating and cooking. This field has as yet scarcely been touched. True, there are now on the market many domestic burners, but they are comparatively expensive and require a small motor or other source of power They are more or less complicated and a mystery to the average housewife or janitor. What is required, in the writer's opinion, is a burner fed by gravity alone, without need of expensive mechanical equipment. I am speaking now of a burner to handle fuel oil and not the more expensive and comparatively dangerous kerosene. Such a burner will mean a fortune to some inventor, and will be of incalculable benefit to the householder.

I unhesitatingly make the prediction, however, that within a comparatively short time every home will be equipped with oil burning installations. Think of it, no dirty coal to handle nor ashes to take out; regulation of fires at will by the turn of a valve; instead of the coal wagon the tank wagon will drive up and without trouble or noise deliver three or four months' supply to a tank in the cellar. Or we might go a step further and picture a central oil supply station in a large city pumping oil to all parts of the city and metered out to consumers in the same manner that gas and water are now supplied. Truly, there is a wonderful opportunity for the engineer here who can devise a burner for general use.

Ultimately the oil burner will come into universal use by virtue of its own merits, just as the automobile has within the last 20 years largely replaced the horse and wagon.

In conclusion, I present herewith a list of comparatively recent installations representing change from the use of coal to fuel oil, with number of boilers equipped in each case:

American Printing Co., Fall River, Mass., 10 Edge Moor boilers.

American Sugar Refining Co., Boston, Mass., 12 Babcock & Wilcox boilers, one separately fired Foster steam superheater, 36 bone char drying kilns.

Amoskeag Manufacturing Co., Manchester, N. H., 64 Manning boilers.

W. & A. Fletcher Co., Hoboken, N. J., 2 horizontal return tubular boilers.

Hoboken Land & Improvement Co., Hoboken, N. J., 4 Babcock & Wilcox boilers.

Pilgrim Steam Laundry, Brooklyn, N. Y., 2 Babcock & Wilcox boilers.

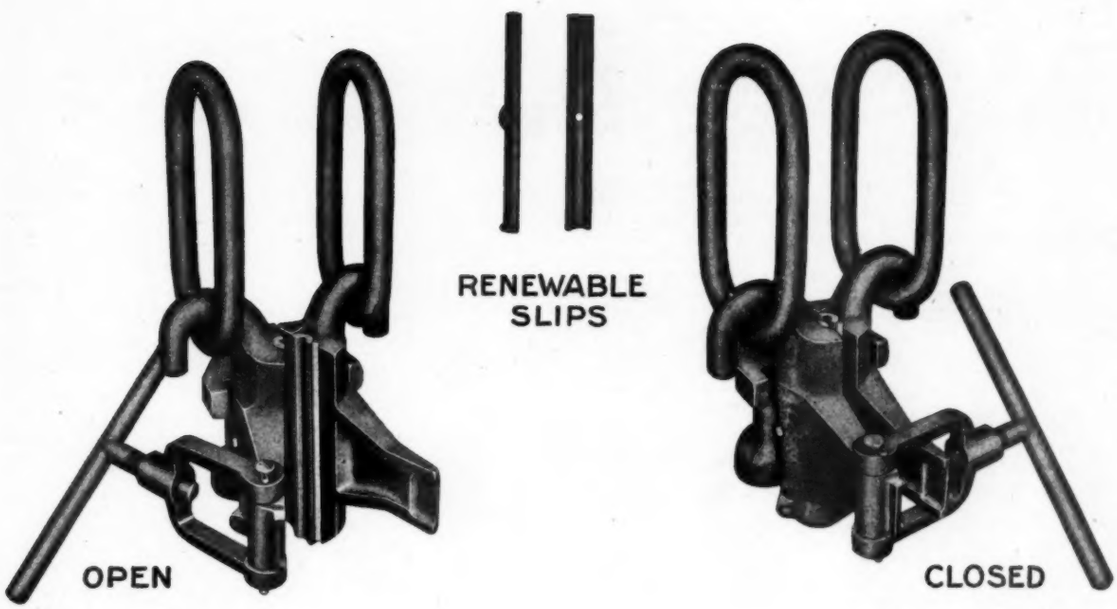
Cumberland County Power & Light Co., Portland, Me., 3 Heine boilers.

S. S. Leviathan (now S. S. President Harding), 46 Shultz-Thornycroft boilers.

Refineria Argentina, Rosario, Argentina, 6 Sulzer boilers, 2 Sulzer-Garbe boilers.

The above is a partial list of installations equipped with Peabody-Fisher wide-range mechanical burners.

# IDEAL WIRE LINE CLAMPS




*Perfect Balance*
*Positive Grip*

*Parts Interchangeable*
*Slips Renewable*

*Note also simple method of retaining links in locked position as well as auxiliary groove for gripping sand line. Provision made for jockey stick connection.*

# NATIONAL SUPPLY CO'S

# Summary of August Field Operations

## More Wells Were Completed Than in July, But the Initial Production Was 54,478 Bbls. Less. Falling Off in New Work

### RESULTS IN ALL FIELDS

**Summary of Wells Completed**

| Field— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Eastern | 506 | 3,807 | 82 | 71 |
| Central Ohio | 97 | 182 | 38 | 32 |
| Lima | 67 | 945 | 12 | 0 |
| Indiana | 19 | 292 | 3 | 0 |
| Kentucky-Tennessee | 214 | 3,498 | 45 | 13 |
| Illinois | 32 | 589 | 1 | 0 |
| Kansas | 156 | 7,796 | 45 | 3 |
| Oklahoma | 625 | 85,446 | 145 | 52 |
| North Central Texas | 245 | 30,647 | 70 | 6 |
| East Central Texas | 49 | 26,460 | 12 | 0 |
| Gulf Coast | 142 | 43,931 | 42 | 10 |
| North Louisiana and South Arkansas | 175 | 13,690 | 38 | 13 |
| Wyoming | 34 | 12,275 | 6 | 0 |
| Montana | 15 | 2,925 | 4 | 0 |
| Utah | 1 | 0 | 1 | 0 |
| Total, August | 2,377 | 232,483 | 544 | 200 |
| Total, July | 2,312 | 286,961 | 482 | 140 |
| Difference | 65 | 54,478 | 62 | 60 |

**Summary of New Operations**

| Field— | Rigs | Drg. | Total |
|---|---|---|---|
| Eastern | 231 | 464 | 695 |
| Central Ohio | 66 | 127 | 193 |
| Lima | 1 | 87 | 88 |
| Indiana | 0 | 43 | 43 |
| Kentucky-Tennessee | 11 | 410 | 421 |
| Illinois | 0 | 38 | 38 |
| Kansas | 84 | 231 | 315 |
| Oklahoma | 344 | 1,482 | 1,826 |
| North Central Texas | 129 | 522 | 651 |
| East Central Texas | 11 | 163 | 174 |
| Gulf Coast | 95 | 396 | 491 |
| North Louisiana-South Arkansas | 105 | 372 | 477 |
| Wyoming | 206 | 514 | 720 |
| Montana | 16 | 159 | 175 |
| Utah | 0 | 21 | 21 |
| Total, August | 1,299 | 5,029 | 6,328 |
| Total, July | 1,448 | 5,190 | 6,638 |
| Difference | 149 | 161 | 310 |

In all the field east of California during the month of August there were 2,377 wells completed, of which 544 were dry and 200 were gas wells, leaving a balance of 1,633 oil wells, which yielded an initial daily production of 232,483 bbls. In the month of July the completions numbered 2,312, of which 482 were dry holes and 140 gas wells, the remaining 1,696 oil wells giving a total initial production of 286,961 bbls. In June the oil wells numbered 1,587, dry holes 432, gas wells 133, and the initial production was 298,910 bbls. The average initial production of the new wells in August was 142 bbls.; in July 169 bbls, and in June 188 bbls. The results in August compared with the results in July indicate a gain of 65 in completed wells and a gain of 66 in oil wells; 52 more dry holes, and 50 more gas wells. The initial production in August fell off 54,478 bbls. from July, and 12 000 bbls. of the initial production shown in August came from one well in Limestone County, Texas, that was not producing at the close of the month and several thousand bbls. were credited to wells in the Gulf Coast that later sanded up and are not producing. The actual difference in initial production was nearer 70,000 bbls. than 54,000 bbls., although this may be reduced if the wells mentioned "come back." The August results as compared with those of June show a gain of 225 in completions; a gain of 109 in oil wells, but a falling off of 66,427 bbls. in initial production which, in fact was nearer 92,000 bbls. for the same reason given in relation to the August-July figures.

The drop in new production in the two months, July and August, ought to have a cheering effect on the trade generally. In the face of a low market for crude and the constant increase in crude stocks news of a lessening of the new production can be received with much better grace than the news of a big increase.

Oklahoma slumped very materially in initial production, from 155,084 bbls. in July to 85,446 bbls. in August, the completed wells also dropping in number from 745 to 625. It was in this state that the greatest falling off was noted, the other states not showing much difference in results in the two months as the following comparative figures will show: Eastern fields, in July 3,158 bbls., in August 3,807 bbls.; central Ohio, in July 91 bbls., in August 182 bbls.; Lima, in July 845 bbls., in August 945 bbls.; Indiana, in July 424 bbls., in August 292 bbls.; Kentucky-Tennessee, in July 2,114 bbls., in August 3,498 bbls.; Illinois, in July 626 bbls., in August 589 bbls.; Kansas, in July 5,330 bbls., in August 7,796 bbls.; north central Texas, in July 25,526 bbls., in August 30,647 bbls.; east central Texas, in July 23,625 bbls., in August 26,460 bbls.; Gulf Coast, in July 38,011 bbls., in August 43,931 bbls.; north Louisiana and south Arkansas, in July 17,980 bbls., in August 13,690 bbls.; Wyoming, in July 13,047 bbls., in August 12,275 bbls.; Montana, in July 1,100 bbls., in August 2,925 bbls.

In new work the falling off in the totals were apparent. There were 1,299 rigs up and 5,029 wells classified as drilling, a total of 6,328 bbls. at the close of August, while at the close of the July report the rigs numbered 1,448, and the drilling wells 5,190, a total of 6,638, a falling off in August of 149 in rigs, and 161 in wells drilling, or a total drop of 310. At the close of June there were 1,635 rigs and 5,108 wells drilling, a total of 6,743, showing a net loss in new operations at the close of August of 415 from the end of June.

### OKLAHOMA

**Summary of Wells Completed**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Washington | 23 | 221 | 4 | 0 |
| Nowata-Rogers | | 0 | 6 | 6 |
| Osage | 124 | 29,490 | 10 | 2 |
| Tulsa | 41 | 3,598 | 12 | 7 |
| Okmulgee | 64 | 2,147 | 30 | 9 |
| Okfuskee | 39 | 3,655 | 7 | 12 |
| Muskogee-Wagoner | 15 | 57 | 12 | 0 |
| Creek | 97 | 27,435 | 20 | 3 |
| Pawnee | 23 | 1,228 | 4 | 3 |
| Payne | 10 | 1,710 | 3 | 0 |
| Kay | 5 | 130 | 1 | 2 |
| Garfield-Noble | 26 | 7,715 | 7 | 1 |
| Carter | 62 | 4,924 | 7 | 3 |
| Stephens-Cotton | 56 | 1,296 | 14 | 9 |
| Miscellaneous | 32 | 1,775 | 13 | 1 |
| Total, August | 625 | 85,446 | 145 | 52 |
| Total, July | 745 | 156,084 | 146 | 49 |
| Difference | 120 | 69,638 | 1 | 3 |

**Summary of New Operations**

| County— | Rigs | Drg. | Total |
|---|---|---|---|
| Washington | 0 | 9 | 9 |
| Nowata-Rogers | 0 | 6 | 6 |
| Osage | 94 | 247 | 341 |
| Tulsa | 11 | 35 | 46 |
| Okmulgee | 25 | 130 | 155 |
| Okfuskee | 24 | 124 | 148 |
| Muskogee-Wagoner | 6 | 35 | 41 |
| Creek | 79 | 247 | 326 |
| Pawnee | 19 | 73 | 92 |
| Payne | 9 | 52 | 61 |
| Kay | 1 | 21 | 22 |
| Garfield-Noble | 17 | 102 | 119 |
| Carter | 15 | 120 | 135 |
| Stephens-Cotton | 12 | 123 | 135 |
| Miscellaneous | 32 | 158 | 190 |
| Total, August | 344 | 1,482 | 1,826 |
| Total, July | 423 | 1,543 | 1,966 |
| Difference | 79 | 61 | 140 |

During August Oklahoma completions totaled 625 with an initial production of 85,446 bbls., 145 dry holes and 52 gas wells. In July the State had 745 completions, with an initial daily production of 155,084 bbls., 146 dry holes and 49 gas wells.

This shows 120 less completions and 69,638 bbls. less initial production than for July. The difference is probably owing to the reduction in the price of crude at the wells and an effort by producers to shut down and curtail drilling with a view of cutting down production.

As far as the opening of new territory was concerned, August was a dull month in Oklahoma. The most important happening in the fields was the beginning of the gradual decline of the Burbank Field, in Osage County, which is now down to a little more than 70,000 bbls. daily, and has evidently passed the peak if its production. The Lyons-Quinn area, in Okfuskee County, which reached its peak and passed it several months ago, is now down to about 16,000 bbls. daily.

The shut-down movement is also reflected in the summary of new operations for the month, which shows 79 less rigs than in July, and 61 fewer wells drilling. The preponderance of new work is in Creek and Osage Counties, each of which have 247 drilling wells.

### KANSAS

**Summary of Wells Completed**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Butler | 33 | 3,460 | 3 | 0 |
| Marion | 8 | 455 | 3 | 0 |
| Greenwood-Woodson | 49 | 2,226 | 14 | 1 |
| Chautauqua-Elk | 6 | 10 | 4 | 1 |
| Montgomery-Wilson | 6 | 215 | 0 | 0 |
| Neosho-Allen | 19 | 648 | 6 | 0 |
| Miami, Franklin and Douglas | 1 | 0 | 1 | 0 |
| Miscellaneous | 34 | 752 | 14 | 1 |
| Total, August | 156 | 7,796 | 45 | 3 |
| Total, July | 212 | 5,330 | 75 | 6 |
| Difference | 56 | 2,466 | 30 | 3 |

**Summary of New Operations**

| County— | Rigs | Drg. | Total |
|---|---|---|---|
| Butler | 28 | 67 | 95 |
| Marion | 17 | 16 | 33 |
| Greenwood-Woodson | 19 | 43 | 62 |
| Chautauqua-Elk | 4 | 16 | 20 |
| Montgomery-Wilson | 0 | 5 | 5 |
| Neosho-Allen | 0 | 6 | 6 |
| Miami-Franklin-Douglas | 0 | 4 | 4 |
| Miscelaneous | 16 | 74 | 90 |
| Tota, August | 84 | 231 | 315 |
| Total, July | 93 | 262 | 345 |
| Difference | 9 | 31 | 30 |

During August Kansas completed 156 wells with a daily production of 7,796 bbls. to start with. Forty-five were dry and 3 were gas wells. In July the State completed 212 wells, with an initial production of 5,330 bbls., 75 of which were dry and 6 were gas wells.

That the fewer completions were larger producers than those completed in July is proven by the 2,466 bbls. more initial production from 56 fewer wells than in July, and was partly due to several wells of the 100-bbl. class completed in Greenwood County, and a couple that came in for better than 500 bbls. daily apiece in the Fox-Bush Pool, Butler County.

New work, as is the case with Oklahoma, shows a slight falling off, there being 9 fewer rigs and 31 less drilling wells than in July.

### NORTH CENTRAL TEXAS

**Summary of Completed Work**

| District— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Wichita | 84 | 9,832 | 22 | 0 |
| Burkburnett | 24 | 372 | 10 | 0 |
| Eastland | 52 | 12,050 | 10 | 3 |
| Stephens | 36 | 3,835 | 13 | 1 |
| Young | 22 | 3,953 | 8 | 2 |
| Wildcats | 27 | 1,605 | 7 | 0 |
| Total, August | 245 | 30,647 | 70 | 6 |
| Total, July | 172 | 25,526 | 49 | 7 |
| Difference | 73 | 5,121 | 21 | 1 |

**Summary of New Work**

| District— | Rigs | Drg. | Total |
|---|---|---|---|
| Wichita | 14 | 120 | 134 |
| Burkburnett | 5 | 23 | 28 |
| Eastland | 16 | 90 | 106 |
| Stephens | 35 | 85 | 120 |
| Young | 21 | 74 | 95 |
| Wildcats | 38 | 130 | 168 |
| Total, August | 129 | 522 | 651 |
| Total, July | 164 | 501 | 665 |
| Difference | 35 | 21 | 14 |

In the north central Texas fields 245 wells were completed in August with initial production of 30,647 bbls. There were 70 dry holes and 6 gas wells. In July the completions were 172, the initial production 25,526 bbls., dry holes 49 and gas wells 7. A gain of 73 in completions is shown in August; and a gain of 5,121 in new production; 21 fewer dry holes and 1 less gas well. In new work a slight falling off is shown. There were 129 rigs up, a loss of 33, and 522 wells drilling a gain of 21, or a net falling off of 14.

### EAST CENTRAL TEXAS

**Summary of Completed Work**

| County— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Limestone | 36 | 17,525 | 9 | 0 |
| Navarro | 12 | 8,935 | 2 | 0 |
| Freestone | 1 | 0 | 1 | 0 |
| Total, August | 49 | 26,460 | 12 | 0 |
| Total, July | 46 | 23,625 | 14 | 0 |
| Difference | 3 | 2,835 | 2 | 0 |

**Summary of New Work**

| County— | Rigs | Drg. | Total |
|---|---|---|---|
| Limestone | 7 | 57 | 64 |
| Navarro | 1 | 45 | 46 |
| Freestone | 0 | 15 | 15 |
| Kaufman | 1 | 8 | 9 |
| Miscellaneous | 2 | 38 | 40 |
| Total, August | 11 | 163 | 174 |
| Total, July | 10 | 216 | 226 |
| Difference | 1 | 53 | 52 |

There were 3 more wells finished in east central Texas during August than in July, and new production increased 2,835 bbls., but this was due to the fact that a new wildcat, at Kosse, 25 miles south of the Mexia Field, and in Limestone County, came in with an initial production rated at 12,000 bbls. This is the most important discovery in the east central district since the discovery well at Mexia. There were but 12 holes reported during the month, 2 less than in July.

New work fell of in August due to the Mexia Field dropping off, but with the new excitement at Kosse, Limestone County should show an increase in the next report as timbers are already on the way for over 30 rigs. There was one more rig shown for August, while the drilling wells fell off 53, a net decrease of 52 in the grand total, which amounted to 174, 11 rigs and 163 drilling wells for August.

### GULF COAST

**Summary of Field Operations**

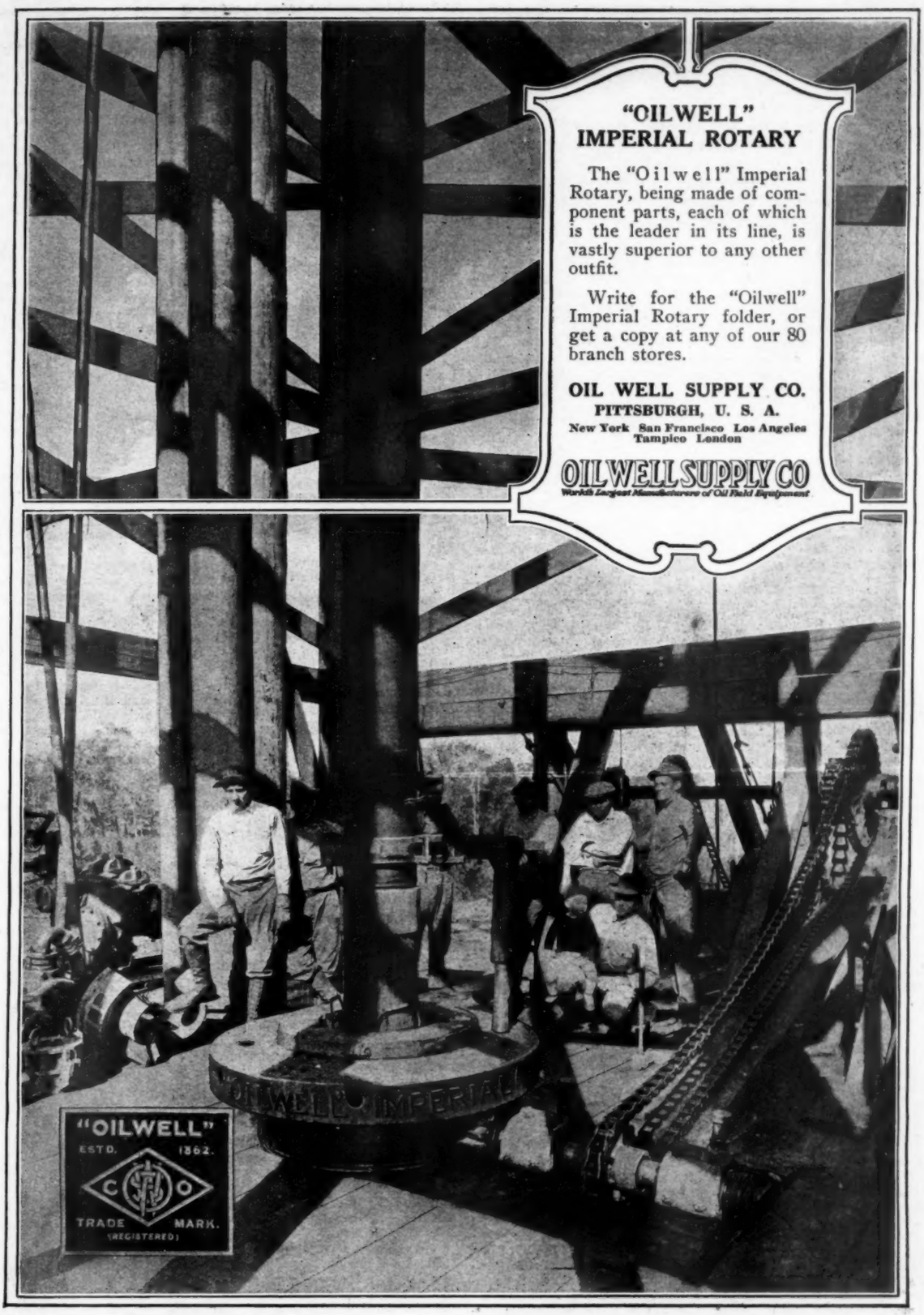
| District— | Comp. | Prod. | Dry | Gs. | Rg. | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Anse La Butte | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Batson | 3 | 25 | 0 | 0 | 0 | 3 | 3 |
| Blue Ridge | 1 | 2,500 | 0 | 0 | 0 | 3 | 3 |
| Barber Hill | 2 | 375 | 0 | 0 | 3 | 4 | 7 |
| Dayton | 0 | 0 | 0 | 0 | 2 | 5 | 7 |
| Damon Mound | 6 | 1,175 | 2 | 0 | 1 | 8 | 9 |
| Edgerly | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Goose Creek | 7 | 300 | 4 | 0 | 4 | 26 | 30 |
| Humble | 7 | 475 | 2 | 0 | 7 | 4 | 11 |
| Hull | 14 | 10,410 | 1 | 4 | 7 | 19 | 26 |
| Jennings | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Markham | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Orange | 27 | 17,110 | 8 | 2 | 9 | 26 | 35 |
| Pierce Junct'n | 5 | 200 | 4 | 1 | 1 | 4 | 5 |
| Spindletop | 3 | 10 | 1 | 0 | 0 | 3 | 3 |
| Saratoga | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Sour Lake | 7 | 105 | 3 | 0 | 0 | 6 | 6 |
| Somerset | 22 | 196 | 0 | 0 | 14 | 31 | 45 |
| Vinton | 3 | 275 | 0 | 0 | 0 | 7 | 7 |
| W. Columbia | 11 | 9,075 | 2 | 0 | 4 | 17 | 21 |
| Miscellaneous | 24 | 1,700 | 14 | 3 | 42 | 220 | 262 |
| Total, Aug. | 142 | 43,931 | 42 | 10 | 95 | 396 | 491 |
| Total, July | 116 | 38,011 | 43 | 7 | 98 | 418 | 516 |
| Difference | 26 | 5,920 | 1 | 3 | 3 | 22 | 25 |

New production in the Gulf Coast region during the month of August totaled 43,931 bbls., against 38 011 bbls. in July, or an increase of 5,920 bbls. While these figures ostensibly looked formidable in the face of curtailed operations in the pools, on analysis it will be seen that many of the largest wells finished during the month sanded almost within 24 hours and that in reality the net gross new output is below that of last month.

Twenty-six more wells were completed in August than during July, the totals being 142 against 116. One less dry hole is numbered in August.

The shut down campaign is reflected in the number of wells drilling in the re-

(Continued on Page 116)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# Oklahoma-Kansas Oil Fields

*By CHARLES W. WOOD*

Creek County leads in the number and importance of wells completed in Oklahoma. New pools in the Bristow Field which add to the importance of Creek as a producing county. Burbank shows a number of completions, but none as good as 1,000 barrels. New wells in Okemah district, in Okfuskee County. Southern wildcats reviewed.

TULSA, Okla., Sept. 4.

Important progress in the shut-down movement begun by producers in Oklahoma consequent to the falling of the crude oil market was made during the month of August. Creek and Osage Counties, the two largest oil producing centers in Oklahoma at present, which were subjected to a drilling orgy for several weeks prior to the reduction in the price of crude, both show an encouraging increase in the number of wells shut down.

In Osage County, where, because of strict laws calling for prompt completion of wells, there are in normal times fewer wells shut down from a comparative standpoint than in any other district in Oklahoma, August shows 19 wells with the drill idle as compared to only 4 at the end of July. Creek County had only 23 operations shut down at the end of July, but at the end of August there were 44. Okmulgee County showed a slight decrease in the number of wells shut down, there being 51 with the drill idle at the end of July and 47 at the end of August, but there was a falling off of new rigs erected amounting to 15.

Curtailment in the starting of new operations, together with the apparent shut-down movement also shows for both Creek County and the Osage. At the end of July, Osage County had 115 new rigs standing, but at the end of August there were only 94, a drop of 26. Creek County had 93 new rigs at the end of July, and at the end of August 79, a decrease of 15, the same as Okmulgee County.

On the other hand, Osage County showed an increase for August over that of July in the number of wells drilling, there being 236 in July and 247 at the end of August. The only other counties which showed an increase in the number of wells drilling in August over the number drilling in July were Nowata-Rogers, Pawnee, Kay and Garfield and Noble. Pawnee County, which has a new pool in the Otoe district and some intensive development near Mannford, had 81 rigs and wells drilling at the end of July and 92 at the end of August. Kay County had 22 wells drilling and rigs up at the end of August and only 14 in July, while Garfield and Noble Counties had 119 rigs and wells drilling at the end of August and 111 at the end of July.

Okmulgee County had the largest decrease of any of the counties in the number of new rigs and wells drilling at the end of August as compared to July, the decrease being 43. In July, the total for the county was 198 and at the end of August 155. Operators in this county have announced they will attain a complete shut-down if crude oil market conditions do not improve.

The State of Kansas, as a whole, made little progress in the shut-down movement, there being a difference of only 30 for the whole State. At the end of July, there were 345 rigs and drilling wells and at the end of August 315 rigs and drilling wells. Butler County showed an increase of 5 new rigs for August over July, but a decrease of 8 in the total operations underway. Greenwood and Woodson Counties had 20 less rigs and drilling wells going at the end of August than at the end of July, the actual figures being 62 for August and 82 for July.

### New Creek County Pool

Another Dutcher sand pool was chalked up for the record of Creek County, Oklahoma, the forepart of the week, although it may be a small one. The discovery well belongs to the Red Bank Oil Co. and is located on the Ireland farm, NW cor. SW, Section 10-16-8, a few miles northwest of Bristow. Top of the Dutcher sand was found at 3,175 feet and the well is reported by the company to have started at 500 bbls. The oil is only 20 gravity.

That the well is located on a separate pool seems to be certain through the fact that the nearest Dutcher sand production is the Roland Oil Co.'s wildcat, Section 23-16-8, over 2 miles to the southeast and separated by a Dutcher sand dry hole. The Red Bank Oil Co. is well protected with acreage in the new district, having a block of 200 acres on which the well is located.

Failure to find pay in a diagonal southeast offset to the well recently brought in by the Wolf Oil Co., Section 10-16-9, is the fate of the Wolf interests, who have drilled to 3,015 feet in the C W half SW, Section 10-16-9, with no pay found.

A deep test drilled by the Lyons-Petroleum Co. near Okemah, Okfuskee County, has resulted in the well going into water at the interesting depth of 3,975 feet. The test was located on the Comi farm, SW cor. SE, Section 2-11-9, and is on a large block of acreage owned by the company.

An oil showing at 3,017 feet near Holdenville, Hughes County, found by the Diamond Oil Co. and Wilmot, C SE, Section 36-8-8, was being prepared for a shot. It was reported with some oil in the hole and about 13 feet of sand, but the general opinion of those who have seen the well is that it will make only a small pumper at the best.

Another well was added to the Midwest Pool, Okfuskee County, by the Independent Oil & Gas Co., whose No. 2 Pigeon, NE cor. NW SE, Section 2-10-9, came in at 720 bbls. a day. Sand in this well was from 3,078 to 3,090 feet, nearly 100 feet nearer the surface than the other producing wells in the pool found pay, but this is due to the new well being situated in a low spot.

What appears to be a dry hole and one of importance, was drilled by the National Exploration Co. on the Watson farm, 3 miles south and east of the original oil well brought in by the Watchorn Oil & Gas Co. in the Otoe district, Pawnee County. The Watchorn well is located in the NW cor. SW, Section 33-23-3e, and the test drilled by the National Exploration Co. is in the NE cor. SW, Section 1-22-3e, which has been shut down with nothing showing at 3,685 feet. The oil sand in the Watchorn well was found at a little more than 2,750 feet. Another important deep test for that region, although located several miles east, is the J. A. Dingwall No. 1 Edwards, NW cor. SE, Section 27-23-4e, which was shut down with nothing showing at 3,932 feet.

Efforts to prove up the new pool 1 mile south of the original Watchorn well by the Magnolia Petroleum Co. were delayed when the company drilled into 27,000,000 feet of gas at 2,579-94 feet, delaying progress to the oil pay. The pool has also been definitely cut off 5 miles to the south by the Watchorn Oil Co.'s No. 1 Jackson, SE cor. NE, Section 29-22-3e, an old dry hole carried to 4,086 feet and now shut down with no pay sand evident. Another test at an interesting depth in this locality is the Douglas Oil Co.'s No. 1 Mercer, NE cor. Section 15-22-4e, which found the top of the Bartlesville sand with no production at 3,442 feet and was drilling again at 3,470 feet.

Upper Payne County has two more tests started. The Marland Refining Co. has spudded in and is drilling on the Meads farm, SE cor. SW, Section 13-20-3, and the same company was rigging up ready to start a test on the Carter farm, SE cor. Section 16-20-4. A little further south, near Stillwater, Ed Reese was delayed with a fishing job at 2,655 feet on the Babcock farm, SE cor. of Section 21-19-2.

The adopted policy of the Independent Oil & Gas Co. of Okmulgee to immediately buy into producing areas newly opened, was again evidenced this week when the company lost no time in getting a rig on the ground to offset the new Wilson & Leberman well, Section 29-15-10, Creek County. The new well, which is credited with a production of 500 bbls. daily, is located in the SE cor. SW, Section 29-15-10, and the Independent operation is an east offset.

Deep dry holes and good producing wells vied with each other in Creek County this week affecting the production of the county, which was on the decrease. The Waite Phillips Co. completed three wells in the Continental Pool district, with an aggregate initial production of 1,800 bbls. a day from the Dutcher sand, the largest of which was an 800-bbl. well. In the same district, the Jomac Oil Co. got an 800-bbl. well, the Transportation Oil Co. a 600-bbl. well and Joe Abraham a 900-bbl. well. Detailed descriptions of these wells will be found under the Creek County detailed report below.

Northwest of the pool, the Prairie Oil & Gas Co. failed to find pay on the Durant farm, NE cor. SW SE, Section 18-16-9, and have abandoned the well at 3,585 feet. The Waite Phillips Co. was drilling ahead with No. 2 Micco, NW cor SW, Section 23-16-9, at a depth of 3,140 feet. It looks as if they have missed production in the Dutcher sand. In the same section, The Texas Co. was also drilling below Dutcher sand depths in No. 2 West, SW cor. SE, the depth being 3,250 feet.

Two tests in the west and south parts of the pool have drilled into water. The Tuxedo Oil Co.'s No. 1-A Sewell, SE cor. SW SW, Section 28-16-9, drilled into water in the Dutcher sand at 2,960 feet, and the Margay Oil Co. got water in the same sand at 3,010-17 feet in No. 2 Scott, NW cor. NE NW, Section 33-16-9.

The wildcat well of the Phillips Petroleum Co. on the Hazlett farm, Section 1-24-4, which was last week reported as a 300-bbl. well, was evidently overestimated, as it is now making oil at the rate of 100 bbls. per day, although it was flowing at a greater rate when it first came in.

### Creek County

Three new gassers have been brought in in the Bristow district.

A new gas well in the district northwest of the Continental Pool, Creek County, was brought in by the Elro Oil & Gas Co., whose No. 1 Mosquito, CSL SW NE NW, Section 6-16-9, was making 3,000,000 feet of gas from 10 feet in the Dutcher sand topped at 2,790 feet. Another new gas well in this region is the Jomac Oil Co.'s No. 2 Cain, CNL NE SE SW, Section 10-16-9, which topped the Dutcher sand at 2,947 feet and was making 15,000,000 feet at 10 feet in. The tools were lost in the hole, causing a fishing job. The largest of the three gassers is the Skelly Oil Co. and Phillips Petroleum Co.'s No. 1 Orne, SW cor. 13-16-9, which came in with a flow of 25,000,000 feet daily from the Dutcher sand at 2,857-67 feet.

The Waite Phillips Co. completed several good producers in the Continental Pool. The company has an 800-bbl. well in No. 5 Jacobs, SE cor. NE NE, Section 22-16-9, from the Dutcher sand at 3,022-29 feet. The same company has a 400-bbl. producer in No. 3 Micco, SE cor. NW SW, Section 23-16-9, sand at 2,950-67 feet. The same company's No. 4 Houston, NE cor. SW SW, Section 26-16-9, started at the rate of 600 bbls. daily from the Dutcher pay at 2,985-2,990 feet. The Jomac Oil Co. has a particularly good well in No. 2-A Carr, SW cor. SW NE, Section 26-16-9, the well starting naturally at the rate of 800 bbls. daily from the Dutcher sand at 2,939-2,944 feet.

Another good well in this vicinity was the Transcontinental Oil Co.'s No. 4-A Looney, NE cor. NW, Section 26-16-9, which started at 600 bbls. daily from sand at 2,972-95 feet. Joe Abraham completed the largest well in the district for the week in No. 2 Vaughn, NW cor. SE SW, Section 33-16-19, the well starting at 900 bbls. a day from sand at 2,930-45 feet.

The Prairie Oil & Gas Co. shut in 24 000,000 feet of gas in No. 5 Shoals, SW cor. NW, Section 33-16-9, sand at 2,945-56 feet. The Phillips Petroleum Co. has a big gasser in No. 1 Hawkins, SE cor. NW, Section 4-15-9, from sand at 1,193-1,212 feet. There was water in the bottom of the hole.

### Osage County

Two more wells were being completed in the Hominy district, Osage County. The Tidal Osage Oil Co.'s No. 24, CSL SW NW, Section 34-22-10, found the oil sand at 1,898-1,930 feet and after a shot the well began flowing at the rate of 30 bbls. a day. The Winona Oil Co. was drilling into the top of the gas sand at 1,830 feet in No. 15, SE cor. SW SE, Section 27-22-10.

The Flesher Petroleum Co. deepened its big well, CWL SE, Section 1-22-9, Hominy district, 7 feet, bringing it down to about the same level as the big producing offset of the Atlantic Oil Producing Co. reported last week. The Flesher Co.'s well responded to the deeper drilling with a production of 200 bbls. an hour, and at the same time the production of the Atlantic Oil Producing Co.'s well dropped to 190 bbls. an hour. The Atlantic Oil Producing Co.'s well had been flowing about 8,000 bbls. a day, and the Flesher Co.'s well about 1,200 bbls. before the latter well was deepened.

### Caddo County

Two deep tests have reached interesting depths in the western part of the Cement Field, Caddo County. The Magnolia Petroleum Co.'s No. 1 Knoles, SE cor. SW SW, Section 27-6n-10w, was drilling at 3,520 feet, and the same company on the Dambo farm, NE cor. SE, Section 29-6n-10w, was drilling at 3,-

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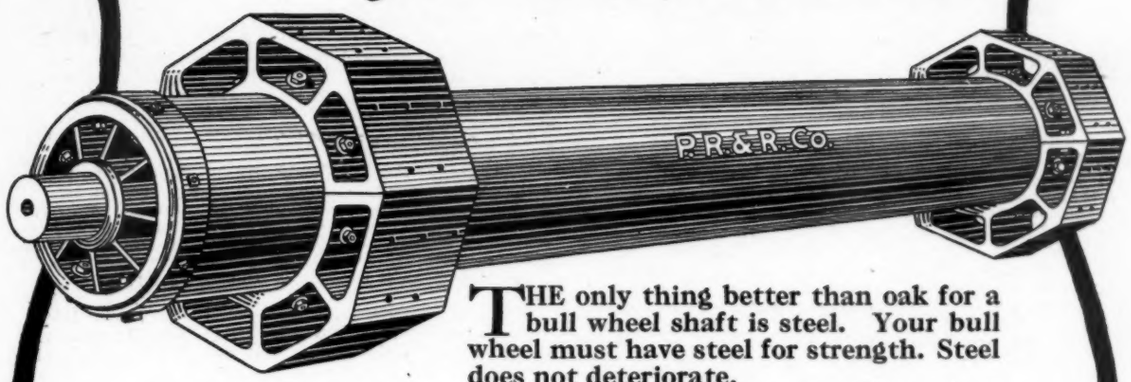


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480 feet. The same company should be in the pay sand this week with No. 1 Estes, CEL SE SW NE, Section 10-5n-9w, which was drilling at 2,275 feet. Two more tests that were nearing the sand were the Homa-Okla Oil Co.'s No. 4 School Land, NW cor., Section 13-5n-9w, which had shut down to cement the 8-inch casing at 2,065 feet, and the English Drilling Co.'s No. 1 Frey, which was shut down to cement 8-inch, at 2,125 feet. The total depth of this latter well was 2,366 feet.

**Noble and Garfield**

In the north Billings district, Noble County, the Healdton Oil & Gas Co. had the timbers on the ground for No. 2 Rence, CWL NW NW, Section 11-24-1w.

The Mid-Co. Petroleum Co. completed No. 9 Washburn, CSL SE SW, Section 15-23-2w, in sand at 2,662-94 feet, and the well was making 10 bbls. on the pump after the shot. Faler and Reed spudded in 10 feet and shut down No. 1 Copper, NW cor. NE, Section 3-23-1w.

**Tulsa County**

Several more wells are drilling near sand depths in the Turkey Mountain district, Tulsa County, where West and others have completed another good-sized well. No. 7 Edwards, CNL NW SW, Section 1-18-12, which came in at 500 bbls. from sand at 2,156-58 feet. The Diamond Refining Co. was drilling at 1,930 feet in No. 1-A Garrett, SW cor. NW, Section 35-19-12. The Good Will Oil & Gas Co. should be at pay sand depths within a few days, having reached 1,650 feet in No. 1 Pah-Cah-Nay, CSL SW NE, Section 27-18-11. West and others were at 1,750 feet in a triplet well, No. 2-A Smith, NE cor., Section 11-18-12.

**Grant County**

There are several wells drilling below the 3,000-foot level in the Deer Creek Field, Grant County. The Western States Oil Co. was cleaning out at a total depth of 3,510 feet in No. 1 Swaggart, SW cor. SE SE, Section 15-27-3w, an old well drilled deeper. The Blackwell Oil & Gas Co.'s No. 2 Martin, SW cor. NW SW, Section 23-27-3w, also an old well, was shut down at 3,265 feet. Schoenwaldt & Gourley have shut down No. 3 Martin, NW cor. SW SW, Section 23-27-3w, at 3,480 feet. This is a twin location to No. 1 on the farm.

In southeastern Grant County several operations are making slow progress because of shut-downs or fishing jobs. Lynch & Clements have a fishing job at 1,265 feet in No. 1 Vansant, CEL SE SE NE, Section 35-26-3w. Nelson & Faling have shut down at 685 feet No. 1 Childs, C SE, Section 13-25 4w. The Meteor Oil & Gas Co.'s No. 1 Hoffman, CEL SE NW NW, Section 14-25-3w, was drilling at 900 feet. The Howarth Oil & Gas Co. shut down No. 1 Babbitt, CSL SE NW SW, Section 21-25-3w, at 1,320 feet.

**Kay County**

East of Newkirk, in Kay County, the Carter Oil Co. completed No. 5 Smith, NE cor. SW SE, Section 8-28-3e, after a shot with 20 quarts in sand at 3,335-51 feet. The well was put to pumping and started at 100 bbls. daily. The Globe Oil Corporation has a deep fishing job in No. 1 Ebersole, NE cor. SW, Section 34-28-2e, where the tools were lost at 3,648 feet. The Alcorn Oil Co. drilled into water at 3 585 feet in No. 1 Farnik, C SE NE, Section 35-27-3e.

Another well at an interesting depth in this county is the Frank Dingee No. 1, on the Stockton farm, SE cor. NE SW, Section 26-26-3e, which was drilling at 3,655 feet.

**Cowley County, Kansas**

In Cowley County, Kansas, the Emerald Oil Co.'s No. 2 Kukuk, CSL SW NE, Section 24-32-4, has been staked as a location. The Arkansas Fuel Oil Co.'s No. 1 Lowe, NW cor. SW, Section 5-32-5e, is dry and abandoned at 2,347 feet.

In Creek County, Oklahoma, northwest of Bristow, the Prairie Oil & Gas Co. completed what appears to be two deep failures drilled to the Wilcox sand horizon. The company's No. 3 Myers, SW cor. NE SW, Section 9-16-8, found the Wilcox at 3,548-86 feet but got no natural flow. It was then shot with 100 quarts, but did not respond with any production.

On the same lease the company had no better luck with No. 4, located in the SE cor. NW SW. This well got the Wilcox from 3,572 to 3,954 feet, but a shot with 140 quarts resulted in the well going into water. These two wells are located in the same section where the Red Bank Oil Co. has been getting some fair sized wells from the deep Wilcox pay, the latest being the company's No. 5 Myers, SW cor. SE SW, where the deep pay was found at 3,554-3,635 feet and started at 350 bbls. a day naturally.

However, this Township yielded some good wells in the past week. One of them was the Roland Oil Co.'s No. 1 Scott, NE cor. SW, Section 23-16-8, which started at 700 bbls. a day naturally from sand at 3,105-3,110 feet. The same company got a larger well in No. 3 Deere, SW cor. SE NE, Section 23-16-8, which is good for 960 bbls. a day from sand at 3,155-56 feet. In the same section the Prairie Oil & Gas Co. got a 300-bbl. well in No. 1 Murrell, NW cor. SE, sand at 3,136-41 feet. The well recently brought in by Dick Mason on the Broadnax farm, SE cor. NW, Section 23-16-8, which started at 125 bbls. a day from sand at 3-121-26 feet, has increased its flow to 300 bbls. a day.

The White Oil Corporation got a hole full of water in the Dutcher sand at 3,168-3,252 feet in No. 1 Warrior, SE cor. NE SE, Section 34-16-8, but was drilling for a Wilcox test at 3,270 feet.

In the southern part of the Continental Pool the Burke-Hoffield Oil Co. has been drilling deeper an old gas well on the Edwards farm, SE cor. SW NW, Section 33-16-9. It is No. 4 on the lease. This week the well was drilled into the Dutcher sand at 2,949-53 feet and started off flowing at the rate of 1,200 bbls. per day.

The Roland Oil Co. has abandoned four operations located in Section 3-15-8, west of the company's well which came in in May at a sensational rate of flow, but has since stopped producing. The company's No. 1 Alex, NE cor. SE, Section 3-15-8, is dry and abandoned at 3,134 feet, being dry in the Dutcher sand. No. 2 Alex, SW cor. NE SE, had been abandoned at 2,150 feet, and No. 4 Alex, CNL NE SE SE of the section is dry and abandoned after drilling to the Dutcher sand, total depth 3,160 feet. The company is making a deep test for the vicinity with No. 3 Alex, CSL SW NE SE of the section, which has been drilled through the Dutcher formation and was underreaming the 6-inch at 3,202 feet.

The Pulaski Oil Co. completed No. 4 Bear, SE cor. NE NE, Section 3-14-8, sand at 2,476-2,534 feet, making a 60-bbl. well after a shot.

The Bradstreet Oil Co. and others had hard luck with No. 1 Bearhead, SE cor. Section 10-14-8, and about everything seems to be in the hole except the derrick. Sand was found at 2,440-90 feet, from where 600 feet of oil rose in the well, but a string of tools and 100 quarts of nitroglycerine are also in the hole, delaying the completion. In the same section the Cosden Oil & Gas Co.'s No. 5 Bear, SE cor. NE, was showing for about 100 bbls. from pay at 2,436-96 feet, but will be shot.

Another well in this section is the Oklahoma Central Oil Co.'s No. 1 Bearhead, NE cor. SE, which was shot with 100 quarts and started at 100 bbls. a day from sand at 2,434-74 feet. The Tibbens Oil Co. has completed a rig for No. 1 Sewell, SW cor. NE, Section 13-14-8. The Skelly Oil Co. has a well that started at 500 bbls. daily in No. 4 Harjo, C NE NE NW, Section 22-14-8, sand at 3,247-51 feet. In the same section The Texas Co. failed to get any production from No. 3 Roberson, C NE NW NE, after a shot with 80 quarts in sand at 2,435-78 feet. It is drilling deeper.

The Skelly Oil Co. got a show of oil on the Pick farm, NE cor. SE, Section 34-14-8, sand at 2,399-2,472 feet, and will shoot it.

**With the Wildcatters**

In Love County the Drillers Syndicate has shut down the test on the Wilson farm, SE cor. NW NE, Section 11-7s-2e. The total depth is 410 feet. The Northwestern Oil Co. has also shut down its test, which is located on the Starrett farm, NE cor. SE NE, Section 29-6s-3e, total depth 1,200 feet. The Union Petroleum & Supply Co. has run into some hard luck in its test in the CW half W half SW, Section 27-6s-2e, where the 8-inch casing collapsed at 2,560 feet. Reed and others were drilling at 150 in No. 1 McLaren, NE cor., Section 9-7s-1w.

Several interesting tests are located in Carter County. The Home Oil Co. was drilling at 510 feet in No. 1 Brown, NW cor. SW, Section 27-3s-2e. The Magnolia Petroleum Co. has shut down at 2,443 feet on the McCarty farm, C SE NE NW, Section 26-3s-1w. Cole and Marshall shut down at 2,602 feet on the Carroll farm, CWL NW NW NW, Section 29-3s-1w. The Owl Oil Co. has reached a depth of 1,216 feet in No. 1 Pace, C SW SE SE, Section 12-3s-1e. The Carter Oil Co. was drilling at 1,400 feet on the Perry farm, C NW NW SW, Section 10-4s-1w.

In Marshall County the Magnolia Petroleum Co. was drilling at 445 feet in No. 1 Bowen, C NE NE NE, Section 12-8s-5e.

In Caddo County the Justice Oil Co., which is drilling a wildcat on the Horton farm, NE cor. SW NE, Section 8-6-13w, got a small show of gas in sand at 2,120 feet, but the well was plugged back to 1,687 feet, where the 6-inch casing was pulled and re-run.

In Grady County the Airsmith test in the NW cor., Section 31-6n-6w, drilled through a barren sand at 2,306-14 feet and was drilling deeper at 2,320 feet.

A new rig has been added to the Beckham County wildcats. The Barker Oil Co. has one up in Section 22-9n-23w, and will make a try for the pay found by the Twin Hills Oil Co. farther south.

The Empire Gas & Fuel Co. was drilling at 940 feet in its test in the C SE SE SW, Section 25-12n-14w, Custer County.

In Washita County the Rita Oil Co. was underreaming at 15 feet off the bottom, which is 4,154 feet, on the Joyce farm, CSL SW SW, Section 21-11n-19w. In the same county the Little Bow Oil Co. was trying to shut off water at 1,854 feet in No. 1 Wilkins, SW cor. NE, Section 20-8n-16w.

In Kiowa County the Long Beach Oil Co. was shut down at 500 feet to repair the boiler at No. 1 Allen, NW cor. SE, Section 21-7n-17w.

A rig is on the ground for a test in McIntosh County owned by Curley Bynum and others, and located on the Emartha farm, NE cor. SE, Section 30-12-15.

**Osage Completions**

Completions in the Burbank Field during the first part of the week failed to bring to light any wells of the 1,000-bbl. daily class or better, the largest being a well that started at 895 bbls. The steadily decreasing size of the wells in the field seems to bear out the prognostication that from now on a steady but natural decrease in the daily production of the field may be looked for, with occasional increases, perhaps, if larger wells are found and brought in several at a time. The newest completions and wells near completion in the pool are as follows:

The Phillips Petroleum Co. and the Skelly Oil Co.'s No. 11, C NE SW SE, Section 25-27-5, was completed with an initial daily production of 700 bbls. after a shot in sand at 2,940-95 feet. The Sinclair Oil & Gas Co.'s No. 11, SW cor., Section 36-27-5, sand at 2,926-3,003 feet, started at 300 bbls. daily after the shot. The same company's No. 16, shot in sand at 2,910-74 feet, started at 200 bbls. daily. The Phillips Petroleum Co. and the Skelly Oil Co.'s No. 16, C NE SW NW, Section 30-27-6, was completed after a shot in sand at 2,919-58 feet and started at 460 bbls. The Prairie Oil & Gas Co. was getting ready to shoot No. 13, C NE SE NE, Section 30-27-6, which started at 50 bbls., naturally, from sand at 2,897-2,965 feet. The same company's No. 15, C SW NE NE, Section 30-27-6, was drilled through sand at 2,894-2,957 feet, but made no oil naturally and was being cleaned out for a shot.

The Carter Oil Co.'s No. 14, CEL NE SE SW, Section 31-27-6, flowed 50 bbls. the first 24 hours after a shot in sand at 2,840-92 feet. The same company's No. 16, C SW NE SW, Section 31-27-6, is a 60-bbl. well to start with after a shot in sand at 2,838-87 feet. The same company's No. 16, C NW SE SE, Section 31-27-6, sand at 2,831-2,909 feet, was flowing 35 bbls. naturally, and was being prepared for a shot.

## RACE AGAINST TIME IS WON BY CARTER CREW AND A FORTUNE SAVED

"Awake! Arise! or be forever fall'n!" says Milton in Paradise Lost.

A Carter drilling crew heard the words of the bard while at work on the Carter Oil Co.'s test on the Page farm, Section 13-16-10, Creek County, Oklahoma, and they speeded up. The result was the largest initial producer of the week and the salvation of a fortune for their employers as all that prevented the loss by the company of the well together with the valuable lease on which it is located were a few anxious hours.

Without a producing well, the lease would have expired Friday at midnight. On Friday afternoon, the well was drilling a few feet above where the Dutcher sand was expected. The termination of the lease was less than nine hours away. A loosened bit, a treacherous cable, a balky engine—any one of a number of small mishaps would have meant the loss of the well.

But the bit went into the Dutcher sand and the well responded immediately with a flow of 70 bbls. an hour, 1,680 bbls. a day, and the lease was saved. The well is located in the center of the west line, northwest, southeast, southeast of the section.

## THESE BOYS PROVED THAT THE MODERN DRILLER HAS HIS DAD'S SPORTSMANSHIP

A drilling crew working for the Noble Drilling Co. in southern Oklahoma is in a position to challenge any drilling crew in the world as far as speed in changing locations is concerned. This crew has not only evidently hung up a new record for speed in changing equipment from one location to another, but is entitled to double credit because the record was made during the hottest weather southern Oklahoma has seen this summer.

The crew is under the direction of two "Arts," the surname of one being Simpson and the other Olson. These two Arthurs started the crew on the Rexroat lease of the Cotton Belt Oil Co. in the Hewitt Field, Carter County, at tearing down a string of rotary tools. The time of the start was 9 a. m. sharp, and at 5 p. m. the next day the tools had been moved 15 miles to the Graham Field and were rigged up and starting a new hole.

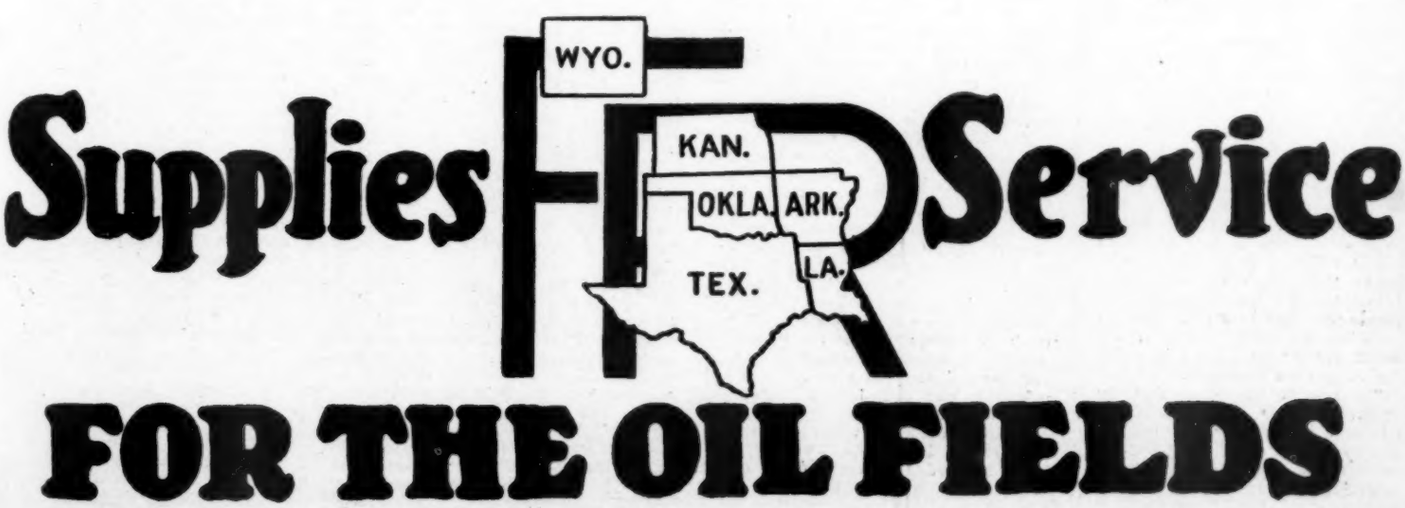
There may be a better speed record than this, but it has not been made generally public to date.

Famous among the early wells of Texas was The Guffey Petroleum Company's No. 1 Riley, in the Batson Field. This well achieved fame as being a "Man-Killer," as well as for producing a great amount of oil

When Riley No. 1 came in it made a very poisonous gas—so poisonous, in fact, that it killed several people and many mules, horses, dogs and chickens. It was one of the worst wells from a standpoint of being difficult to handle that was to be found in the entire Batson Field.

John H. Tucker, now Superintendent of Production for the Gulf Production Company, who later bought out the Guffey interests, and W. H. Halley, who recently achieved fame in South America, were working on the "Man-Killer" when it came in. To them fell the job of swabbing the well, a job that almost caused the death of Halley.

This well was 1,750 feet deep, and has been the subject of many heated arguments. Records show that it put 34,000 barrels of fluid into its storage tanks in 24 hours by actual gauge. However, the Riley No. 1 was commonly referred to as an 18,000 to 23,000-barrel well.



The largest well of the first part of the week in the pool was brought in by the Sinclair Oil & Gas Co., whose No. 13, CEL SE NE NE, Section 32-27-6, after flowing naturally at the rate of 100 bbls. daily, was shot in the pay at 2,900-59 feet and started at 895 bbls. a day.

The Prairie Oil & Gas Co.'s No. 15, C SW NE SE, Section 32-27-6, top of the sand at 2,866 feet, was still drilling at 2,900 feet with the well flowing at the rate of 385 bbls. a day naturally. This probably will be a big well when shot. The Carter Oil Co.'s No. 1, SW cor. NE, Section 33-27-6, is a 45-bbl. well after a shot, sand at 2,958-85 feet. The Sinclair Oil & Gas Co.'s No. 9, CEL NE SE NW, Section 33-27-6, started at 350 bbls. a day from sand at 2,941-90 feet, broken, after the shot.

The Prairie Oil & Gas Co.'s No. 16, C NW SE SW, Section 33-27-6, was shot in sand at 2,923-85 feet and started at 315 bbls. a day. Clint Moore & Co.'s No. 4, SE cor. SW, Section 1-26-5, sand at 2,852-2,907 feet, was shot and made 50 bbls. the first 24 hours. The Gardner Petroleum Co.'s No. 11, CEL NE SE SE, Section 1-26-5, shot in sand at 2,786-2,860 feet, started at 350 bbls. a day. The Sinclair Oil & Gas Co.'s No. 16, CN half S half SE, Section 1-26-5, is a 100-bbl. producer from sand at 2,845-2,906 feet after the shot. The Gardner Petroleum Co. and the Marland Refining Co.'s No. 2, NW cor. NE, Section 12-26-5, sand at 2,840-2,919 feet, which made 40 bbls. naturally before the shot, was shot with 180 quarts resulting in a bridge which will have to be cleaned out before the well again produces.

Some other Osage County completions were: The Douglas Oil Co.'s No. 12, SW cor. NE, Section 32-24-8, shot with 40 quarts in sand at 685-720 feet and making 10 bbls. The same company's No. 21, CWL SW NW, Section 33-24-8, shot in sand at 721-29 feet and starting at 10 bbls. a day. The same company's No. 1, NW cor. SW, Section 33-24-8, 50 bbls. a day after a shot in sand at 688-699 feet. Markham and others had a 25-bbl. well after the shot in No. 8, C NW SW, Section 2-23-9, sand at 2,143-76 feet, but were drilling deeper at 2,800. C. W. Titus completed a 10-bbl. well in No. 4, CNL NE, Section 35-23-10, after a shot in pay at 1,788-1,800 feet. The Riverland Oil Co.'s No. 12, CWL SW, Section 16-22-9, was completed after a shot in sand at 2,146-61 feet, and flowed 15 bbls. the first 24 hours. The Finance Oil Co.'s No. 3 CNL NW SW, Section 18-22-11, is a 20-bbl. well to start with, after a shot in sand at 1,681-96 feet. Elliott & Smith's No. 11, CE half NW, Section 31-22-12, sand at 1,341-63 feet, was shot and started at 10 bbls.

### Carter County

Another showing for a good well in the regular pay was found by the Cotton Belt Oil Co. in No. 1 Bennett, C SE SE NW, Section 31-2s-2w, Graham district, Carter County, where 200 bbls. was swabbed from sand at 2,335-63 feet. The well was running casing to drill deeper for the 2,600-foot pay.

The Amerada Petroleum Corporation was bringing in another well in the Brock area, No. 9 Baptiste, C NE NE SE, Section 20-5s-1e. There was 1,000 feet of oil in the hole from broken sand at 1,538-47 and 1,547-60 feet.

The deepest test so far drilled in the district, which is being put down by the Amerada Petroleum Corporation as a thorough test for deep sand possibilities, has reached a depth of 3,885 feet. It is No. 1 Westheimer, SW cor, SE NW, Section 28-5s-1e. There are also four other wells in the district drilling below 2,000 feet, all but one belonging to the Amerada. They are No.1 Baptiste, CS half SE SW, 20-5s-1e; No. 1 Champion, CS half NE SW, Section 20-5s-1e; No. 1 Baptiste, SW cor. NE NE, Section 20-5s-1e, and Hugh Sturm and others' No. 1 Pittman, C SE NW SW, Section 20-6s-1e, in Love County.

### High Grade Oil at Healdton

Renewed interest in the old Healdton Field, Carter County, was caused this week by the discovery of a new producing sand bearing high grade oil, the discovery well being the Gilmer Oil Co.'s No. 5 Hernstadt, 360 feet south and 99 feet east of the center of Section 4-4s-3w The new pay, which was unexpected, was found at 2,190-2,200 feet after the drill had passed through more than 50 feet of yellow lime formation into white lime. The well made a flow lasting several minutes, the crude being light green in color and testing more than 42 gravity.

Two other tests drilled for the 2,700-foot sand failed to find the pay encountered by the Gilmer well. These tests were drilled by the Bull Head Oil Co. and the Pure Oil Co., the the finding of pay of 2,200 feet no doubt will result in a general deeper drilling campaign, which will keep operators in the old field busy for a long time to come, as they have been waiting for the result of the tests to the 2,700-foot pay before drilling deeper the older wells.

The Gilmer well seems to have been lucky from the start. The regular Healdton sand was cased off at 790-1,040 feet, and another sand was drilled through at 1,080-1,105 feet, which carried some water and was estimated good for about 30 bbls. of oil.

The high gravity oil which is being produced in the Bull Head Oil Co.'s No. 14, deep well on the Lowery farm in the NE SW, Section 4-4s-3w, Healdton Pool, is bringing 50 cents per barrel more than the Mid-Continent quotation, or $1.75 a barrel. Gravity of the oil is around 46, and the entire output of the producer, which is now yielding about 8 barrels daily, is being purchased by the city of Healdton for use in its power plant. The crude is used as fuel for the oil engine. Sand in this well was found around 2,750 feet and was shot after the well had originally been drilled to a total depth of 8,400 feet, and then plugged back. Its initial production was approximately 40 barrels. The well flows daily after being agitated. Delivery of the oil is made on the lease to tank wagons of the city.

Three other tests are now going down after the deep high gravity pay.

### Greenwood County

In the Virgil district, Greenwood County, the Magna Oil & Refining Co.'s No. 5 Shadel, SE cor. Section 15-23-13, has the rig completed. R. G. Gillespie's No. 6 Swanson, C NE SE, Section 20-23-13, was rigged up ready to drill.

Fisher and others had a rig in for No. 3 Seely, CEL NE SW NW, Section 5-23-11. The White Eagle Oil Co. has and Nelson have made a location for No. 2 Seely, SW cor. NE SW, Section 5-23-11. The White Eagle Oil Co. has made a location for No. 2 Seely, CWL NW SE NW, Section 5-23-11. The Arkansas River Gas Co. completed a rig for No. 1 McKenzie, NW cor. NE, Section 11-26-11. Spencer and others have abandoned No. 1 Olds, NW cor. SW, Section 17-28-11, at 1,206 feet.

Smith-Carlson-Smith have spudded No. 1 Mark Lots, CW half NW SE, Section 34-25-10. Ward McGinnis and others have a failure in No. 1 Christy, SE cor. SW NW, Section 12-26-9, which is dry and abandoned at 1,460 feet.

A location for a test on the Claycombe farm, NW cor. SW NE, Section 36-24-8, has been made by Dick and Phipps. It is in northwestern Greenwood County, Kansas. Polhamus and others have completed a rig for No. 3 Marshall, CSL SW SW, Section 34-24-9. Hellman and others have made a location for No. 1 Gregg & Coulter in the SW cor. SE SW, Section 9-25-9. The Mid-Kansas Oil Co.'s No. 2 Ladd, CWL SW NE, Section 30-25-9, has also been staked as a location.

## NEW POOL NORTH OF CURRIE, NAVARRO CO., TEX.

(Continued from Page 9)

est from other sections surrounding these fields. It is believed Huntington Beach has reached the limit of its production, which is now about 30,000 bbls. a day. During the week ended August 26, the daily average production of this field was 32,911 bbls., which was 323 bbls. greater than the average for the previous week, although three new wells were reported with an initial production of 2,200 bbls. a day. The Standard Oil Co. completed No. 1 Surf at 4,430 feet, the well starting at 600 bbls. a day. The Union Oil Co. had the best completion of the week, its No. 8 Copeland, finished at 4,250 feet, starting at 1,100 bbls. a day. The Shell Co. completed No. 1 Slater at 4,461 feet, it having an initial production of 500 bbls. daily.

### West Kentucky-Tennessee

The best completion of the week in Warren County, Kentucky, was the United Petroleum Syndicate's No. 5 Sam Martin, northwest of Bowling Green in the Levi Simmons district. The well was drilled to a depth of 1,231 feet, 95 feet below the shale with 17 feet of sand and is estimated to be making 100 bbls. daily. No. 6 on this lease was also completed during the week and came in good for 50 bbls. at 1,173 feet. In the Glen Lily extension of the Davenport Pool, the Big Jack Oil Co. completed its No. 34 on the R. L. Morris lease, good for 100 bbls. at 1,149 feet. On the H. Ferguson lease, adjoining the Uncle Jeff Oil Co., completed its No. 10, good for 10 bbls. at 1,014 feet. Quite a line contest existed at the Junction of the Lewis-Carpenter-Dent, Brown and Mitchell leases in the No Name Pool in Allen County. Four wells were being completed in a circle less than 100 feet in diameter. The first to be finished was the No. 13 Lewis, offsetting No. 6, Carpenter-Dent. In bailing this well, the oil caught fire from the forge on the Carpenter-Dent lease, and did considerable damage, enabling Lowman Brothers to complete their No. 6 Carpenter-Dent and get on the pump several hours in advance of the Lewis well. This No. 6 well pumped 154 bbls. the first 24 hours at 160 feet. No. 13 Lewis is estimated to be a 50-bbl. pumper at 160 feet. Keyes and associates completed a 20-bbl. well on the Dennis lease in the No Name Pool, the oil testing about 50 degrees Baume.

### Mexico

The Mexican Eagle Oil Co.'s No. 9 Cerro Veijo, which blew in last Saturday a week ago, began to show oil and was closed in while storage is being erected. The Penn Mex Fuel Co.'s No. 3 Molino, in the South Fields, drilled into salt water at 2,900 feet. In the Panuco Pool, the Transcontinental Petroleum Co.'s No. 2, Lot 4, Cacalilao is another big gasser, being estimated at 20,000,000 feet and making between 200 and 300 bbls. of oil with the gas at 1,665 feet. It is believed when the gas pressure diminishes, the oil will flow in substantial volume. The Transcontinental Petroleum Co.'s No. 2, Lot 14, Tanchicuin is dry at 2,200 feet.

### Canada

The Peace River Drilling Co.'s test, 30 miles north of Peace River town in northern Alberta, has finished dry at 905 feet. The most important activities at present are those in the Sweetgrass Fields of southern Alberta. On the Montana side, the Gladys-Belle-Larson well, on Section 18-35-2w, is reported a producer with oil standing 650 feet in the hole. On the northern edge of the Sunburst Field, the Sunburst-Boyce's No. 1, SW 23-36-2w, 9 miles south of the international boundary, is reported to have developed 10,000,000 feet of gas with 1,200 pounds pressure.

### Wyoming

The Kinney Coastal Oil Co. completed a well in Section 19-39-78, in southern Salt Creek, which is estimated as good for 1,500 bbls. The Cat Creek Field now has 97 producing wells with several tests nearing completion. Considerable excitement resulted during the past week from reports that the Fensland Oil Co. was drilling a well on the Teapot Dome. The only company now drilling on Teapot Dome is the Mammoth Oil Co.

## SINCLAIR CONSOLIDATES ITS KANSAS OFFICES

The consolidation of the Wichita, Kans., offices of the Sinclair Refining Co. started September 1. It is expected that the consolidation of the two offices will be completed by September 10. According to E. P. Morton, manager of the company, the change was made to Kansas City because of better distributing and shipping facilities there. The $200,000 building which the Sinclair Co. erected at Wichita two years ago will be used as a warehouse.

## DEPT. OF COMMERCE HAS INFORMATION WHICH THE OIL INVESTOR MAY WANT

The following letter addressed to the editor of The Oil and Gas Journal and signed by H. C. Morris, chief of the petroleum division of the Department of Commerce, Washington, D. C., will be of interest to the trade:

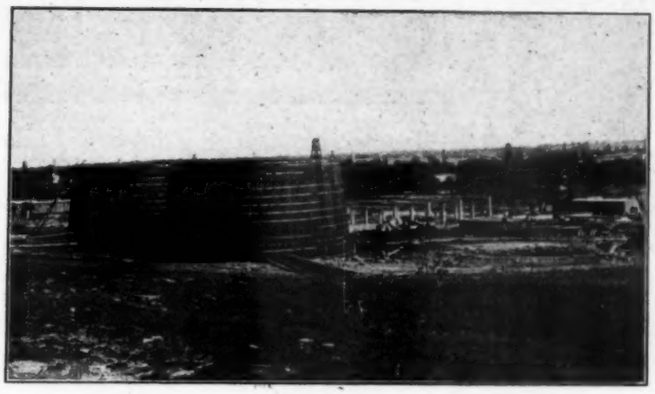
"The Petroleum Division of the Bureau of Foreign and Domestic Commerce of the Department of Commerce frequently receives reports from various sources describing in more or less detail petroleum concessions, or development privileges which are offered for sale, or which need financing.

"There are many American corporations and individuals who are desirous of obtaining such information but who do not know that this division and bureau occasionally receive it. I believe, therefore, it would be of mutual benefit to your subscribers and to us if you would publish a short notice of this fact and suggest that anyone who desires such information as we may have should write to us so that we may notify them when an opportunity arises, and put them in touch with people who may have something interesting to offer. Such letters should specify the country in which the writers are interested.

"It must be understood that the bureau assumes no responsibility whatever in furnishing such information or in establishing contact between the prospective buyer and seller."

## CASE OF YELLOW FEVER PLACES TAMPICO UNDER RULES OF QUARANTINE

TAMPICO, Mex., Sept. 1.—Public Health and Marine Service of the United States has ordered quarantine regulations imposed on Tampico for all United States ports south of the southern boundary of Maryland. This was brought about by one case of yellow fever, which has recently occurred here, supplemented by some three cases that originated at Panuco some 50 kilometers from here. This means all vessels will be carefully fumigated before clearing for the United States, and passengers from here to points south of Maryland will be subject to six days' quarantine, dated from the time of their leaving this port armed with proper health certificates certifying they were free of fever when leaving here. Dr. J. M. Cuaron, a distinguished physician of this place, has adopted energetic measures in behalf of the Federal authorities to destroy the stegomyia mosquito, the transmitter of yellow fever, and properly safeguard any other patients that might contract the disease, thus preventing the development of any new foci.



*Wooden water tanks erected by Black, Sivalls & Bryson for the Phillips Petroleum Co. in the Burbank Field.*

# Perfection Pays Daily Dividends

**The Metal of Which Perfection Tanks Are Made**

By CHARLES P. BUCK, *Petroleum Engineer*

The material used in Perfection Metal Tanks has the most careful consideration. It is well known that crude petroleum as it flows from the well has mixed with it water that is salty and alkaline.

This alkaline water carries substances that might easily cause corrosion and consequent short life in a metal tank constructed of ordinary steel sheets. The metal required must have the strength and toughness of steel and the durability of copper.

Copper is used wherever absolute, unquestioned durability is demanded—on the bottoms of ships in salt water, in vacuum pans of salt works, in stills and brew vats, as an alloy for gold coins and jewelry—anywhere metal must last.

"Thoro" Metal, used in Perfection Metal Oil Tanks, is a scientific alloy of steel and copper. The copper exists in the alloy in the form of a "solid solution" intimately diffused among the mosecular particles of steel in the mass of the metal. Thus every particle of steel in the sheet is protected by this "solid solution"—this film copper.

It gives "Thoro" Metal proof of durability, not only on the surface of the metal, but all through the sheets. It makes the sheets tougher and stronger. They are heat-treated—annealed. "Thoro" Metal, in every test which has been made, has shown a durability six times as great, or more than the best steel.

The old saying "That a Penny Saved Is a Penny Earned" was never more applicable to the oil industry than right now.

At present crude prices, you can't afford to let evaporation cheat you out of legitimate line runs. That big loss which goes into the sultry air may represent the difference between profit and loss on your lease.

Perfection Vapor Pressure tanks, because of their unusual construction and especially designed relief valve eliminate evaporation. They pay for themselves in a short time after installation—in other words, pay you a daily dividend.

In all of the active fields of the country, Black, Sivalls & Bryson maintain service depots where you can obtain Perfection Vapor Pressure Tanks in all the usually required sizes.

Representatives of the company will be glad to figure on your lease requirements. In addition, you will find ample stocks of bolted steel and wood tanks for every purpose.

***"Stop the Leaks at the Top"***

## Black Sivalls & Bryson

INC.

BARTLESVILLE ~ OKLAHOMA

**Sales Offices: Wichita, Kan., Ponca City, Okla., Wichita Falls, Tex.**

# North Louisiana—Arkansas

*By M. L. VAUGHN*

A new oil pool 14 miles west of Haynesville production seems to have been opened by the completion of a well in Webster Parish, Louisiana, which flowed 3,000 bbls. of fluid, 30 per cent salt water, at 2,713 feet. It has been shut in while storage is being erected. Haynesville and Bellevue production shows increase, the former being 2,500 bbls. and the latter 1,150 bbls. more than last week.

SHREVEPORT, La., Sept. 4.

Quite a substantial increase in production is shown in the report for the past week, but two fields in the North Louisiana and South Arkansas district showing a decrease and that very light in both cases. Haynesville made the best record this week, as it did last, showing an increase of 2,500 bbls. daily, with Bellevue second, furnishing an increase of 1,150 bbls. Production from other pools shows very little change, as indicated in the following detailed statement:

| District— | Bbls. |
|---|---|
| Caddo, light | 7,540 |
| Caddo, heavy | 3,330 |
| De Soto and Red River | 6,150 |
| Elm Grove | 1,000 |
| Homer | 14,460 |
| Haynesville | 58,500 |
| El Dorado | 29,740 |
| Bellevue | 6,990 |
| Total | 127,710 |
| Total last week | 123,680 |
| Increase | 4,030 |

Some discussion has been occasioned by the completion of the Webb gasser in Webster Parish of the question of a distinctive name for the new gas area opened up by that well. The gas sand in the Webb well was reached at a level 100 feet higher than in the wells in the Shongaloo territory, about 10 miles north of it, and separated from it by an area in which three salt water wells have resulted in completed operations, which would seem to entitled the Webb well district to a distinctive name. It has been suggested that in as much as an outline of the new structure is indicated by the 5-mile semicircle drawn around the well by the meanderings of Dorcheat Bayou, it should be designated the Dorcheat Gas Field.

Evidence is given of the importance of the effort being made to secure successful completion of the El Dorado Natural Gas & Petroleum Co.'s No. 1 Mellor, Section 1-18-16, by the activities of other operators in that immediate territory. The work of plugging off and cementing has been done very carefully and more than the usual time will be allowed for the cement to harden before another test is made. Should this deep level exploration prove successful the El Dorado Co. may feel thankful for the faith in a deep pay which maintained the efforts of W. M. Coates, who continued operations after an unsuccessful test at 2,600 feet, against the advice of many of his friends. Ratholing was continued from a depth of 2,800 feet to 2,950 feet, where an encouraging sand was picked up. The hole was then reamed to 2,867 feet, where 5½-inch casing was set. Within a few hours, the well began to ooze over and before failure of the shoe upon which casing was set gave evidence of possibilities estimated as high as 1,500 bbls. The well is located one-half mile from Constantin No. 1, the first well completed in the El Dorado district, and only 50 feet from the second, which was the Home Oil & Gas Co.'s Mellor No. 1.

It is reported that the Standard Oil Co. already has started moving machinery onto the 40 acres south of the El Dorado Co.'s well and will begin operations at once. The Constantin Oil Refining Co. is reported to have arranged for an offset test and also to make a deeper test of its No. 1 Fee, in the same section, which was abandoned at 2,560 feet early in July.

Section 20-17-15, in the El Dorado district, may quite properly be designated as a one-man oil field, in as much as it contains five producing wells, all of which may be credited to one man. In the early months of El Dorado's history, Jim Stocks, who had been a successful operator in the Wyoming Field, came to El Dorado and was interested in the organization of a concern known as the Miller Oil & Gas Co. A producing well was completed by the company, but the oil was of low gravity, the price was low, and the well, being a small producer, discouraged other members of the company to the extent that it was possible for Stocks to secure all the outstanding securities of the concern. Shortly after securing control he erected a standard rig on the well with the result that its production jumped 15 bbls. to 250 bbls., at one time running as high as 500 bbls. Since that time, he has completed four wells in the same section, having also acquired other acreage, has one waiting on rig to pump, and will drill others. Three wells have been completed since May 1, each with initial production of 100 bbls. daily, and as he secured Standard pipe line connections shortly after increasing production from the first well, he may be well said to be comfortably situated.

### Haynesville

There were 14 wells completed in the Haynesville district the past week, all producers. The total initial production amounted to 1,540 bbls. daily with the old part of the pool giving the largest yield. With the exception of one 50-bbl. pumper, all the completions were made by the Ohio Oil Co. The largest well of the week was completed by this company on the H. P. Camp, Account 1, lease in Section 15-23-8, pumping 215 bbls. daily from 2,802 feet. The Louisiana Oil Refining Corporation completed No. 2 L. T. Hunt, Section 9-23-8, on the north edge of the field, pumping 50 bbls. at 2,835 feet. In Section 22-23-8, the Ohio Oil Co. made a 50-bbl. pumper of No. 8 J. L. Bond at 2,805 feet.

The same company brought in No. 2 F. Camp, Account 2, Section 24-23-8, pumping 100 bbls. at 2,825 feet. In Section 16-23-8, it completed No. 4 Hunt, pumping 65 bbls. at 2,815 feet, and in the same section brought in No. 9 Hunt, pumping 160 bbls. at 2,825 feet; No. 16 Hunt, pumping 120 bbls. at 2,825 feet, and No. 17 Hunt, pumping 80 bbls. at 2,820 feet. Between the townsite and the old pool, it completed No. 2 Sanders, Section 26-23-8, pumping 200 bbls. at 2,845 feet.

On the east side of the field, it made a 205-bbl. well of No. 3 J. R. Sherman, with 17 feet of sand at 2,835 feet, Section 23-23-8. In this same section, it completed No. 10 L. L. & G. H. Sherman, pumping 100 bbls. at 2,845 feet. On the T. W. Sherman lease, Section 16-23-8, it completed No. 14, pumping 125 bbls. at 2,810 feet. In Section 14-23-8, it completed No. 15 Anna Taylor, pumping 25 bbls. at 2,825 feet. In the adjoining Section 15-23-8, it made a 50-bbl. pumper of No. 12 G. W. Taylor, at 2,810 feet.

### Drilling Operations

Outside of the drilling operations of the Ohio Oil Co., there is very little activity in the proven part of the Haynesville district. At the close of the past week, there were 14 wells waiting on standard rig to pump; 9 wells temporarily abandoned, 37 wells drilling, 7 derricks and 14 locations.

Six miles west of the Union Parish line and about 15 miles east and a little north of the Homer Pool, Adams and associates are moving in rig on No. 1 O'Bannon, Section 25-22-5. The Es-To Oil Co. has shut down No. 1 Tuggle in shale at 3,135 feet, waiting orders. The test is located near the Homer Pool, Section 31-21-6. Fullenweider and others have shut down No. 2 Fullenweider at 800 feet in sand. The test is located in Section 8-23-6, nearly 8 miles east of Haynesville production. The Gilliland Oil Co. has temporarily abandoned No. C-7 S. C. Waller at 2,850 feet, on the north edge of the pool, Section 11-23-8. In this locality, they have derrick pattern on location for No. 5 T. W. Sherman and have made location for No. 6, Section 10-23-8.

The Louisiana Oil Refining Corporation is drilling at 2,535 feet in No. A-2 Beene, Section 13-23-8, on the east side of the pool. Just south of this well, it has set 8-inch casing at 2,760 feet in No. 4 Sherman, Section 23-23-8. On the north edge of the field, it has a fishing job at 2,705 feet in No. 4 T. W. Sherman, Section 10-23-8. The Ohio Oil Co. has approximately 20 rigs runing in the entire field with a number of wells ready to be put on the beam. Most of its activity is in the old part of the district and in the extreme east edge of the pool. The Roxana Petroleum Co. tested No. 1 Smith dry at 3,170 feet and is now waiting orders as they were unable to set 6-inch casing at 3,180 feet. The test is located in Section 4-23-8, approximately 2 miles north of production.

Russell and associates are arranging to set 6-inch casing at 2,705 feet in their test on the Sneed lease in Section 24-23-8. The Simms Oil Co. tested salt water at 2,805 feet in No. 6 A. H. Hunt and is arranging to abandon the well. It is located north of the Livert well, Section 8-23-8, and was gone back into after that well came in and extended the pool.

The same company is down 3,400 feet in its deep test on the Avinger lease, Section 25-22-8. This well is midway between the Homer and Haynesville Pools and is noted as the most interesting wildcat now under way. Smitherman & McDonald are drilling at 2,165 feet in No. 4 Winn, on the north edge of the field, Section 8-23-8, and in the same section they tested salt water at 2,790 feet and have drilled to 2,930 feet in No. 6 Winn. The Standard Oil Co. is arranging to abandon No. B-8 Barker at 2,822 feet, Section 20-23-8. Steele Sandlin and others have resumed drilling in No. 1 Wise and have reached 2,800 feet. This test is located in Section 15-23-6, 10 miles from the Haynesville production.

### Bellevue District

Five wells were completed in the Bellevue district this week, with one failure. Armistead and others completed No. 4 Strange, Section 23-19-11, flowing 10 bbls. at 295 feet. This is the first well that has been completed in Section 23, and marks a slight extension southeast of the proven area. The Gulf Refining Co. brought in No. A-9 Bliss & Weatherbee, Section 15-19-11, flowing 75 bbls. at 360 feet. In the same section, the Humble Oil & Refining Co. completed No. 2 Roy Bliss & Weatherbee, with an estimated production of 3,000 bbls. of fluid, 60 per cent salt water, and 38 per cent b.s. with nearly two feet of sand at 395 feet.

The Sun Co. completed No. 1 Vance-Ford, Section 16-19-11, with an estimated flow of 75 bbls. daily at 373 feet, three feet of sand. In this same section, The Texas Co. tested salt water at 505 feet and abandoned No. 1 Brown after pulling the casing. There is very little activity in the Bellevue Field at the present time and only five rigs are running. The Gulf Refining Co. is rigging up to drill No. A-8 Bliss & Weatherbee, Section 15-19-11. The Standard Oil Co. has three deep tests under way. In Section 14-19-11 it is down 2,140 feet in No. 2 Wyche. Two miles south of the producing area it is drilling at 2,620 feet in its test on the Moory lease. Just south of production it is down 2,140 feet in No. B-1 Kendrick, Section 22-19-11. In Section 16-19-11 it has started drilling No. 8 Bell and is down 255 feet.

### Caddo Parish

Only one well was completed in the Caddo district last week, a small pumper in Section 23-21-15. It was brought in by the Fortuna Oil Co. on the Robertshaw lease, No. 16, pumping 10 bbls. daily at 1,690 feet. In the Hosston district, the Amerada Petroleum Co. is drilling at 3,180 feet in No. 1 Jolly, Section 27-22-15. The Alabama Petroleum Co. is drilling at 2,820 feet in No. 1 Barlow, Section 5-21-15. In the Pine Island district the Ansonia Oil Co. has set 4½-inch casing at 2,645 feet in No. 1 Noel, Section 13-21-15; the Arkansas Natural Gas Co. is drilling at 1,875 feet in No. 253 Ardis & Lay, Section 1-21-15; the Dixie Oil Co. is testing chalk rock at 1,715 feet in No. 46 Robertshaw, Section 14-21-15; drilling at 2,535 feet in No. 1 Robertshaw, Section 13-21-15 and in No. 3 Files & Mabry, Section 14-21-15, it set liner and is bailing with a showing of a little heavy oil at 1,015 feet.

The Doane Oil Co. has set 6-inch casing at 2,700 feet in No. 9 Muslow, Section 5-20-15, and the Fortuna Oil Co. is drilling at 2,450 feet in No. 11 Robertshaw; 2,770 feet in No. 15, Section 23-21-15. The Gulf Refining Co. is drilling at 2,405 feet in No. 1 J. H. Herndon, Section 15-21-15 and has rig up for No. 14 Lane, Section 12-21-15. Chandler & Trayhan are down 2,755 feet in No. 1 Jolly, Section 22-22-15. The Dixie Oil Co. has set 6-inch casing at 2,350 feet in No. B-2 Noel, Section 19-21-14. The Louisiana Texas Community Oil Co. is drilling at 2,410 feet in No. 1 Hill, Section 33-23-16.

### El Dorado

Seven small producers and one failure were reported from the El Dorado district during the past week, the total daily production amounting to only 300 bbls. The best well was the Arkansas Natural Gas Co.'s No. 254 Cullens, Section 4-9-15, which was brought in at 2,190 feet, flowing 100 bbls. The Arkansas Oil & Lease Exchange's No. 2 Benson, Section 9-19-15, is a 75-bbl. pumper completed at 2,150 feet. The Bankers & Producers' No. 1 Polk & Ezell, Section 19-17-14, was brought in at 2,170 feet with 15,000,000 feet of gas and 10 bbls. of oil. Crawford & Sebastian's No. 1 Giller, Section 14-16-15, also produced 10 bbls. of oil with 2,500,000 feet of gas.

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man, Section 5-19-15, proved a failure at 2,150 feet and was abandoned on account of salt water. Keen & Woolfe completed No. 6 McKinney, Section 30-17-15, at 2,220 feet, producing 20 bbls. The Livingston Oil Corporation's No. 7 Rock Island Railway, Section 28-18-15, was brought in at 2,140 feet with 75 bbls. The Woodley Petroleum Co.'s No. 2 Alderson, Section 31-17-15, produced 10 bbls. from 2,220 feet.

**Drilling Operations**

Outside of the addition to the report of a number of new operations, very little activity is shown in the El Dorado district at this time. The Associated P. & R. Co. has its No. 3 Thurkill, Section 29-18-15, waiting on rig to pump at 2,150 feet. Barton and associates renewed development of their No. 1 Willett, Section 18-17-16, which has reached 1,900 feet, where they are now drilling. The Block Oil Co. tested its No. 1 Easter, Section 21-16-11, dry at 2,220 feet, and is arranging to whipstock at 2,100 feet. Bondurant and associates are arranging to set 8-inch casing at 1,100 feet in No. 1 Stegell, Section 3-18-12, 18 miles east of El Dorado.

The Brown Oil Co.'s operation 2 miles east of Wesson, Section 3-19-15, is drilling at 1,250 feet. The new operations of the Constantin Oil & Refining Co. are reported, No. 1 J. L. Burns drilling at 100 feet, Section 12-18-16, and No. 1 Martin, rigging up about 3 miles southwest of El Dorado. The renewed operation of the Eureka Petroleum Co.'s No. S-3 Cullens, Section 4-19-15, is drilling at 2,140 feet. About 6 miles northwest of El Dorado, two new operations are reported in Section 20-17-14. Dr. Frank has derrick on No. 1 Brown, and Gann & Burke cemented 10-inch at 160 feet in No. 2 Murphy.

The Garnet Drilling Co. has set liner and is bailing No. 1 Smith, Section 20-17-14, with eight inches of sand at 2,220 feet. Gardner and associates are drilling 6-inch plug at 2,100 feet in No. 2 Smith, Section 19-17-14. The Harris Drilling Co. is drilling in shale at 1,390 feet in No. 1 O'Stake, 10 miles north of El Dorado. The following are setting 6-inch casing: Humble Oil & Refining Co., at 2,550 feet, in No. 1 Webb, Section 6-18-13, 10 miles east of El Dorado; Ingalls and associates at 2,130 feet in No. 2 Thurkill, Section 28-18-15, 5 miles southeast of El Dorado, and Keen & Woolfe at 2,060 feet in No. 1 Slaughter, Section 10-17-16, 3 miles northwest of El Dorado. Jones and associates are waiting to pump No. 1 Taylor, Section 9-19-15, at 2,170 feet with a foot of sand. A newly reported operation is that of the Livingston Oil Corporation, which has cemented 10-inch casing at 170 feet in No. 8 R. I. R. R., Section 33-18-15, 6 miles south of El Dorado. Another is that of Marr and associates, who have a fishing job for drill bit and collar at 1,800 feet in No. 1 James, Section 29-18-15, 6 miles south of El Dorado. The McLaughlin Oil Co. is drilling at 2,970 feet in No. 1 Stowe, Section 5-17-13, 10 miles northeast of El Dorado. Six miles northwest of El Dorado, the McMurray Drilling Co. is rigging up to drill No. 1 Moody, Section 20-17-14. The Morris Drilling Co. has reached 600 feet in No. 2 Rowland, its offset to No. 1 Rowland, Section 29-18-15, which was recently completed as a 75-bbl. producer. The Mutual Oil set 10-inch casing at 170 feet in No. 1 Spooner, Section 29-19-15, 3 miles southeast of Upland.

The Ozark Oil Co. has shut down for boiler repairs at 1,475 feet in its No. 1 West, Section 19-17-14. S. C. Richardson has derrick up on No. 1 Brown, Section 20-17-14, 6 miles northwest of El Dorado. Rooker and associates set 10-inch casing at 180 feet and are drilling at 810 feet in No. 1 Yarborough, Section 2-17-16, 7 miles northwest of El Dorado. Rush and associates are arranging to abandon No. 2 Smith, Section 28-18-15, 6 miles southwest of El Dorado, which proved to be salt water at 2,160 feet.

The Skelly Oil Co. is testing 15 inches of sand at 2,175 feet in No. 1 Helwig, Section 6-18-15, 2 miles southwest of El Dorado. The Southern Oil & Land Co., after testing salt water with a small showing of oil, is pulling liner to drill deeper from 2,600 feet in No. 11 Armstrong, Section 31-17-15, 1 mile southwest of El Dorado. The Standard Oil Co. is drilling at 2,145 feet in No. 2 Murphy, Section 6-18-15, and has derrick on No. 2 Trimble, Section 1-18-16, 1 mile southwest of El Dorado. Tarkington and associates are waiting on rig to pump with a foot of sand in No. 1 McKinney, Section 9-19-15, 9 miles south of El Dorado.

The Terryfields Oil Co. is washing to bottom of No. 1 Green, Section 19-19-15, which has been standing at 2,300 feet, in expectation of being drilled deeper. The Woodley Petroleum Co. has derrick up on No. 8 Alderson, Section 31-17-15, and is drilling in shale at 900 feet in No. 2 Lovett, Section 5-18-14. Zoder and associates have derrick on No. 1 Moody, Section 17-17-14, 8 miles northwest of El Dorado. At the close of the week there were 21 wells waiting on pumping rig, 42 drilling wells, 10 temporarily abandoned, 4 rigs and 57 derricks in the El Dorado district.

**De Soto Parish**

There were no completions recorded in De Soto Parish this week but a number of interesting tests are under way in that territory. Three miles southeast of Logansport, the De Soto Oil & Gas Co. has set 6⅝-inch casing at 2,560 feet in its test on the Bland lease, Section 12-11-16. On the south edge of the Parish, Eades and associates are bailing liner with a small showing of gas in 36 feet of broken lime at 3,040 feet. The test is on the Nolan lease, Section 15-10-13. The Fortuna Oil Co. is drilling No. 9 Giauque at 117 feet, Section 33-12-11. Lee and others are down 2,725 feet in No. 1 Joyner, Section 28-11-12.

Six miles north of Logansport, the Pilgrim Oil Co. is down 3,855 feet in its deep test on the Ramsey lease, No. 3, Section 34-13-16. The Simms Oil Co. has reached 3,860 feet in its deep test on the Pelican Oil Co. lease, No. 2, Section 8-11-11. Just west of Mansfield, Snell and others pulled liner, cleaned out the hole and reset with a little gas show at 2,965 feet in No. 1 Connell, Section 8-12-14. Ten miles east of Mansfield, The Texas Co. has started drilling No. 29 Christian, and after setting 10-inch casing at 215 feet, have drilled to 905 feet, Section 6-12-11.

**Louisiana Wildcats**

Most of the wildcat interest is centered in south Arkansas, but a number of tests are under way in north Louisiana. At the close of the week there were 9 wells waiting on standard rig to pump, 29 temporarily abandoned, 152 drilling, 11 rigs, 30 derricks and 4 locations.

Bossier Parish—Two miles east of Shreveport, Flournoy and others are drilling at 2,535 feet in No. 1 Kirby, Section 36-18-13. The Gulf Refining Co. is drilling hard lime at 3,730 feet in No. 11 Hodges, Section 24-16-12. Seven miles northeast of Shreveport, Hencke and associates are drilling at 2,700 feet in No. 1 Freeman, Section 15-18-12. Perkins and others have derrick built for a test on the Gayle lease, Section 33-20-13. R. O. Roy is waiting on standard rig to pump No. 6 Caplis, Section 23-16-12. The Western Oil Fields Corporation tested salt water and abandoned No. 1 Childress at 2,005 feet, Section 11-16-12.

Lincoln Parish—Six miles west of Ruston, the Roxana Petroleum Co. is drilling at 1,805 feet in No. 1 Thomas, Section 24-18-4w.

Morehouse Parish—The Ouachita Natural Gas Co.'s No. 4 Allison blew in with an estimated flow of 5,000,000 feet of gas at 2,220 feet and it is now drilling deeper, Section 18-20-5e. The same company has derrick up for No. 5 Allison, in Section 7-20-4e. Eight miles northwest of Bastrop, Morris, trustee, has set 10-inch casing in No. 9 Crossett Lumber Co., Section 14-21-4e. Six miles southwest of Bastrop, the Southern Carbon Co. is down 1,960 feet in No. 7 Spyker, Section 8-20-5e. The Windsor Oil & Gas Co. is drilling 6-inch plug at 2,055 feet in No. 1 Pipes, 10 miles southeast of Bastrop, in Section 10-19-6e. The United Oil Co. has set 10-inch casing and drilled to 250 feet in No. 1 Eldridge, Section 22-20-5e.

Natchitoches Parish—H. A. Cook, trustee, is testing No. 1 J. N. Lofton at 930 feet, with a showing of gas. The test is located 4 miles west of Natchitoches, in Section 37-9-8.

Ouachita Parish—Hatcher & Evans are drilling at 1,735 feet in No. 1 Frierson, Section 20-19-4e. Huber and others are reaming to set 6-inch casing at 2,115 feet in No. 2 Fee, Section 4-18-5e. Potts, trustee, has made location for a well on the Stanley lease, in Section 31-19-5e. The Southern Carbon Co. is drilling at 1,985 feet in No. 13 Fee, and at 1,785 feet in No. 14, Sections 9-19-5e, and 29-19-5e, respectively. The Standard Carbon Co. is down 1,710 feet in No. 1 Vinson, Section 32-19-5e.

Sabine Parish—Brown and others are drilling at 1,825 feet in No. 1 Bowman-Hicks Lumber Co., Section 7-7-12, and in Section 15-7-12 they have derrick up for their third well on the same lease. The Gladys Belle Belmont Oil Co. has resumed drilling in No. 1 Raines and is down 2,235 feet, Section 33-9-11. The Middlesex Oil Co. is drilling at 215 feet in No. 1 Smith, Section 17-7-10. The Pathfinders Syndicate has set 10-inch casing and drilled to 550 feet in No. 1 Long Bell Lumber Co., Section 8-8-13.

Union Parish—In the northwest corner of the parish, near Junction City, just south of the Union County line, J. M. Gardner and others have set 6-inch casing at 2,015 feet in a test on the Brown lease, in Section 6-23-3w. The Gulf Refining Co. is arranging to abandon its deep test in red shale at 3,225 feet. The test is on the Willis-Nichols lease, 5 miles south of the Gardner and others well, in Section 32-23-3w. The Texas Co. has set 10-inch casing at 2,050 feet in a deep test they are making on the Taylor lease, in Section 2-22-2e, 12 miles northeast of Farmerville. Eight miles south of the Union County line, the Transcontinental Oil Co. is drilling at 2,425 feet in No. 1 Carroll, Section 12-22-2w.

Webster Parish—Webster Parish is holding the center of the stage in north Louisiana operations this week and the latest operation of interest is that of Lloyd Harris, in Section 34-23-11, half way between Haynesville and Plain Dealing, in Section 34-23-11. The well blew in with an estimated flow of 3,000 bbls. of fluid per day, 30 per cent salt water and 70 per cent oil, testing 27.3 gravity, and making 5,000,000 feet of gas. The well is now closed in, but has opened new territory and is one of the most interesting completions of the year. The Arkansas Natural Gas Co. is running core barrel at 2,000 feet in No. 245 L. & A. Oil Co., a deep test in Section 24-23-10. Just west of the Haynesville production, the Humble Oil & Refining Co. completed No. 1 Winn, pumping 40 bbls. at 2,805 feet, Section 13-23-9. Kinney Brothers moved rig and abandoned No. 1 Hudson, 7 miles northwest of Minden, in Section 17-19-10. The Lucky Four Oil Syndicate abandoned No. 1 Willis & Brown at 315 feet, Section 4-17-10. Four miles southwest of Minden, Roundtree and others tested No. 1 Tabor dry and are arranging to abandon the well at 1,595 feet, Section 14-18-10. Webb and associates completed No. 1 Merritt, with an estimated 30,000,000 feet of dry gas from 1½ feet of sand at 2,558 feet and the well is now shut down. The test is located 17 miles northwest of Homer, in Section 13-21-10. M. W. Burkhalter is down 2,165 feet in his test on the Burkhalter lease, in Section 29-19-8, 4 miles east of Minden. The Humble Oil & Refining Co. is drilling at 2,740 feet in No. 1 Hicks, Section 10-22-9. Hudson and others are rigging up to drill No. 1 Hudson, Section 17-19-10. Leguers and others are drilling at 1,130 feet in No. 1 Miller, Section 33-19-10, and have started drilling No. 1 Duke, Section 13-23-9. The Lucky Four Oil Syndicate has set 10-inch casing and drilled to 740 feet in No. 1 Baldwin, Section 4-18-10. McCullough, trustee, has derrick pattern op location for No. 1 Allen, Section 30-22-10. The Ohio Oil Co. has set 12-inch casing at 210 feet in No. 1 Saxton, Section 31-23-9. The Rosemont Syndicate has shut down No. 1 Gruner at

## NEW POOL OPENED IN LOUISIANA BY COMPLETION OF WELL FLOWING 3,000 BBLS., 30% SALT WATER

SHREVEPORT, La., Sept. 4.—Completion of a 3,000-barrel producer in Webster Parish furnishes the greatest interest in this district during the past week and provides substantial evidence that a new pool has been opened. The well is located in the northwest corner of the southeast quarter of the southwest quarter of Section 34-23-11, midway between the towns of Sarepta and Springhill and 25 miles northwest of Minden, the seat of Webster Parish. The well is known as Lloyd Harris' No. 3 Pine Woods Lumber Co. and is the third of a series, the first of which was drilled by the Castle Oil Co., and was abandoned as a dry hole at 3,271 feet. The second was taken over by Lloyd Harris and was in the same section. While attempting to set 6-inch at nearly 2,700 feet, the well blew in with an estimated flow of 25,000,000 feet of gas, which ultimately defeated efforts to make an oil well and it was abandoned.

The third and successful operation found a rich oil sand at 2,710 feet, and at 2,713 feet, while running bailer, started flowing at the rate of 3,000 bbls. of fluid per day. This, however, was approximately 30 per cent salt water, the oil testing 27 gravity. The well was permitted to flow at this rate for about half an hour when it was closed in. The following day, 2⅜-inch choker was set through which the well, which is now closed in, flowed at the rate of 1,000 bbls. per day into hastily improvised earth storage. The fluid proved to be about 33 per cent salt water and 1 per cent sand.

The well is 14 miles west of production in the Haynesville district and reflects upon a number of operations in adjacent territory, among which are the following: S. S. Raymond Trustees' No. 1 Huston, Section 33-23-10, 5 miles east; the Seven-Eleven Oil Co.'s No. 1 Adkins, Section 25-21-11, 11 miles south, and which was shut down some time since at 760 feet; the Woodley Petroleum Co.' No. 1 Campbell, Section 2-22-11, 7 miles southeast, and which is now shut in awaiting orders after striking a gas flow of 10,000,000 feet with a showing of oil at 2,650 feet. In Bossier Parish, the nearest exploration, is Hall & Hicks' No. 1 De Moss, Section 20-22-12, 7 miles southwest of the Harris well. The Hall & Hicks operation has been reported for three weeks with a fishing job at 2,070 feet, which gives it a prospect for the same sand as the Harris discovery. With less prospect, but the next nearest, is the Atlantic Oil & Refining Co.'s No. 1 Bollinger, Section 21-22-13, 17 miles southwest, which has reached 3,500 feet, where it also is tied up with a drill bit fishing job.

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1,650 feet, Section 21-20-8. Stineau and others are waiting standard rig to pump No. 1 Kilpatrick at 2,810 feet, Section 13-23-9. In the southeast corner of the parish, Wadley and others are setting 8-inch casing at 1,825 feet in No. 1 Pearce, Section 14-17-9.

**Arkansas Wildcats**

The only completion reported in wildcat territory was the gasser brought in by the George & Jones Drilling Co., in Ouachita County. This was No. 1 Umpstead, in Section 4-15-16, midway between Stephens and Artesian and about 10 miles southeast of Camden. The well came in with a rush from 22 feet of sand, blowing derrick down and 1,500 feet of drill stem out of the hole. The well is estimated to have capacity for daily production of 30,000 000 feet of gas. Very little activity is shown in reports from this territory, many of the wells being at same status as that of previous reports and others shut down.

Calhoun County—The Barnsdale & Foster's exploration in Section 27-14-15, 6 miles north of the V. K. F. well, set 6-inch casing at 2,370 feet and is reported to have 4 inches of producing sand at 2,390 feet in their No. 2 Freeman-Smith Lumber Co. Their No. 3 Freeman-Smith Lumber Co., in Section 31-14-15, 5 miles north of the V. K. F. well, has set 10-inch at 505 feet.

Clark County—The Arkansas Oil Co.'s operation, known as Barrington No. 1, in Section 26-10-20, 3 miles north of the Nevada County line, is reported shut down at 2,790 feet.

Columbia County—E. T. Brown and associates have set 10-inch casing at 240 feet and are drilling at 710 feet in No. 1 Robinson, Section 23-18-23, just east of the line of the Louisiana & Arkansas Railroad and about 12 miles east of Frostville. Guy Cox and associates are drilling at 2,400 feet in No. 1 Davis, Section 14-18-21, 7 miles south of Magnolia. Dexter and others have shut down at 2,650 feet in No. 1 Davis, Section 12-18-21. Hude & Aarens set 6-inch casing at 2 000 feet in No. 1 Adkins, Section 13-15-20, 2 miles northwest of Stephens. The Ohio Oil Co. is drilling at 3,0 0 feet after running core barrel in No. 1 Smith, Section 5-20-19. Queenan & Wells set 6-inch casing at 2,120 feet in No. 1 Webfer, Section 25-15-20, 2 miles south of the Hude & Aarens well. The Transcontinental Oil Co. is drilling at 2,210 feet after going through 2 feet of sandy shale at 2,190 feet in No. 1 Curry, Section 5-16-19, 3 miles south of Stephens. After an extended period awaiting orders at 2 200 feet, Turley, Montgomery & Tate have resumed operations on No. 1 Hall, Section 11-15-20, 4 miles northwest of Stephens, and are drilling at 2,440 feet.

Grant County—Harry Winters and associates are reported to have found a show of dead oil with salt water at 1,830 feet in their test, No. 1 L. L. Lamb, Section 25-6-15, 5 miles northwest of Harlock.

Lafayette County—The Ken Saw Petroleum Co. drilled plug in 6-inch casing and is bailing at 2,700 feet in their test, No. 1 Fee, Section 31-19-24, 4 miles southwest of Bradley and 2 miles north of the Bossier Parish line.

Nevada County—One new operation is shown in Nevada County. Gierson & Williams have derrick up on No. 1 Williams, Section 12-14-20, 9 miles northwest of Stephens. R. B. Nelson and associates are drilling at 1,800 feet in No. 1 Lester & Holton, Section 4-15-20, in the southeast corner of the county, 6 miles northwest of Stephens. In the same neighborhood, the Tri-County Oil Co. is drilling at 2,180 feet in No. 1 Drake, Section 3-15-20, and 12 miles northwest of Stephens, Watkins and associates are drilling at 1,050 feet in No. 1 Waters, Section 11-14-21.

Ouachita County—In the southeast corner of the county, 2 miles north of gas territory, the J. Baker, trustees are drilling at 1,130 feet in No. 1 Ursey, Section 28-15-15. Berry & LeGrande are set 10-inch at 200 feet in No. 1 Murphy, Section 28-15-15. Berry & LeGrand are arranging to set liner in No. 1 McKenzie, Section 36-15-16, after going through 39 feet of sandy shale, now at 1,985 feet. Olvey and associates set 6-inch at 1,830 feet in No. 1 Umpstead, Section 5-15-16. J. B. Reynold's trustees are drilling at 1,100 feet in No. 1 Poole, Section 20-15-15. The Simms Oil Co. set 12½-inch at 200 feet in No. 1 Murphy, Section 28-15-15, and is drilling at 580 feet in No. 1 Reynolds, Section 32-15-15. The Standard Oil Co. set 6-inch casing at 1,950 feet in No. B-1 Murphy, Section 29-15-15. The V. K. F. Drilling Co. has derrick on No. 2 Richardson, Section 29-15-15.

# North-Central Texas Field

*By DAN F. DUGAN*

North Texas fields show gain of 1,720 bbls. daily in production, the largest increase being recorded in the Electra Pool. Third distinct sand for the original Kemp-Munger-Allen Pool was discovered when Prime Oil Co.'s No. 1 Munger came in making 200 bbls. at 1,620 feet. Quiet week passed at Eastland with no completions of importance. Wildcat test south of Graham has oil showing.

WICHITA FALLS, Tex., Sept. 4.

The north Texas fields reported a gain of 1,720 bbls. daily in production for the past week. This is the most substantial increase that has been made in some weeks. The principal gain was made in the Electra Pool, which reported 25,945 bbls., an increased daily production over the previous week of 2,565 bbls. Eastland and Iowa Park made a small increase, while all the other pools show small losses.

The Stephens and Eastland County sectors offered nothing worthy of special note. An extension to the Pioneer Pool is hoped for to the north and northeast, if the Humble Oil & Refining Co.'s No. 1 Dill and the Sims Oil Co.'s No. 1 Len Irvin should, at completion, show up as paying producers. Both of these tests are drilling below 2,000 feet and should reach the depth of the Pioneer pay in a few days. The logs of both wells run almost identical with the logs of the wells on the Armstrong lease, which leads the operators to believe that these tests have a chance for production.

Another week of drouth, with a part of the operations in the south Electra Field shut down and other sections of the field forced to husband their water supply, has shown its effect in the decrease in new wells and also in decreased initial production.

Operations in the Panhandle Field have been quiet for several weeks, but activities are now about to be resumed in the deeper drilling of the older tests and spudding in of new wells. A rig is on the ground for a new test on the Sanders ranch, in Gray County, south of Lefors. The Gulf Production Co.'s No. 1 Wynne, Section 97, Block 7, has been shut down, but is now drilling in lime at 3,350 feet. The test is bailing some salt water. The Texas Co.'s No. 1 Burnett, Section 114, Block 5, Carson County, encountered a gas flow at 2,780 feet and expects to go into pay sand at 3,000 feet. Silk-Bullington-Clark's No. 1 Burnett, in the north part of Carson County, is estimated a 100-bbl. producer, but plans to put this well on the pump have been countermanded for lack of storage facilities.

**Shallow Gas Showing**

Montague County had a small lease boom, caused by a show of gas at shallow depths in The Texas Co.'s No. 1 Lemons, and the Petroleum Producers Co.'s No. 1 Maddox. Both tests are shut down, but offset tests will be started at once. What the exact conditions of these wells are seems to be shrouded in mystery.

Completions in the Burkburnett and Townsite districts are recorded as follows: Aldine Oil Corporation's No. 2 Birk, 60 bbls. at 1,805 feet, and Priddy and others' No. 4 Birk, 15 bbls. at 1,810 feet. Drilling tests of importance are: Baldwin Brothers' No. 2 Kennedy, sand at 1,695 feet, tested water and is drilling at 1,703 feet; Gulf Production Co.'s No. 1 Dale, setting 10-inch casing at 1,305 feet; Hudspedth and others' No. 1 Crosby, shut down at 1,710 feet; Magnolia Petroleum Co.'s No. 1 Cline, drilling at 200 feet; Pigg and others No. 1 Hershey, oil sand at 1,723 feet, flowed 50 bbls., now cleaning out; Priddy and others' No. 8 Birk, ready to drill in and complete on a sand showing oil at 1,648 feet; No. 9 Birk, running core barrel at 1,830 feet; Staley and others' No. 1 Staley, drilling in soft shale at 1,975 feet; Judson Oil & Gas Co.'s No. 12 Dodson, drilling in with a Star machine at 1,117 feet; Lanning & Moninger's No. 8 Copper, cleaning out and will test a sand at 1,250 feet; Stump Oil & Gas Co.'s No. 10 Cropper has 1 bbl. production, but may abandon the test at a depth of 1,400 feet, and Wood Oil Co.'s No. 6 M. K. & T., casing collapsed at 1,367 feet.

Completions reported for Wichita County, outside of Burkburnett and the Townsite territory, are as follows: The Texas Co.'s No. 220 Waggoner, 20 bbls. at 1,825 feet; same company's No. 229 Waggoner, 65 bbls. at 1,885 feet; the Nixon Co.'s No. 10 Lewis, dry at 2,540 feet; Prime Oil Co.'s No. 3 Munger, 180 bbls. at 1,620 feet; Camp Oil & Gas Co.'s No. 1 Overall, 2 bbls. at 950 feet; the same company's No. 3 Overall, 2 bbls. at 950 feet; the same company's No. 5 Overall, 8 bbls. at 350 feet; Gulf Production Co.'s No. 4 Jennings, 200 bbls. at 1,925 feet; Hobbs Oil Co.'s No. 2 Waggoner, dry at 1,930 feet; Kruger and others' No. 1 Waggoner, dry at 2 000 feet; McDaniels and others' No. 1 Douglas, 100 bbls. at 1,945 feet; Hochaday & Shaw's No. 1-C Waggoner, 125 bbls. at 1,630 feet; Magnolia Petroleum Co.'s No. 6-A Duke, 10 bbls. at 895 feet; Planet Petroleum Co.'s No. 61 Burnett, 225 bbls. at 1,930 feet; Steelsmith and others' No. 1 Parker, 25 bbls. at 795 feet, and the Wichita Petroleum Co.'s No. 65 Burnett, 225 bbls. at 1,935 feet.

**Drilling Operations**

Status of the different drilling wells in this section for the past week are reported as follows: K. M. A. Oil Co.'s No. 16 Munger, rigging up to pump an oil sand at 1,735 feet; Prime Oil Co.'s No. 4 Munger, standardizing on top of an oil sand at 1,630 feet; Waggoner & Green's No. 9-C Munger, bailing to test a sand at 1,235 feet; Camp Oil & Gas Co.'s No. 2-A Douglas has an oil sand at 960 feet, hole is caving badly, will clean out and test; No. 1-B Douglas will test a sand and may complete at 920 feet; Green & Dale's No. 2 Beaver-Electra swabbed 100 bbls. and is being completed at 1,935 feet; Gulf Production Co.'s No. 3-B Douglas has a broken sand and will shoot at 1,970 feet; Scott Petroleum Co.'s No. 4-A Ward-Todd, 25 bbls. at 755 feet; Texhoma Oil & Refining Co.'s No. 1 Waggoner, dry at 2,200 feet; Buchanon and others' No. 1 Jennings, bailing with a slight showing of oil at 1,827 feet; Buffalo-Tex Oil Co.'s No. 1 Parker, drilling at 1,820 feet; Cline Oil Co.'s No. 2 Waggoner, plugged at 1,918 feet and shut down for orders; No. 3 Waggoner, drilling in shale at 1,920 feet; Emerick Oil Co.'s No. 3 Burnett, dry at 2,013 feet; Fitzgerald Syndicate's No. 3 Waggoner, pumping to exhaust water after drilling out plug at 1,503 feet; Griswold Oil Co.'s No. 12 Burnett has cemented casing on top of the sand at 1,932 feet; Gulf Production Co.'s No. 12-C Waggoner, broken sand with 100 feet of oil in the hole at 1,958 feet; Humble Oil & Refining Co.'s No. 3-A Waggoner has a dry sand at 2,046 feet; No. 1 Waggoner, sand tested water and will drill deeper at 1,630 feet; Camp Wilson and others' No. 1 Waggoner, bailed salt water and is shut down for orders on a sand at 1,980 feet; Mutual Oil Co.'s No. 1 Burnett has set 6⅝-inch casing on lime at 1,950 feet; National Oil Fields Co.'s No. 1 Jennings, plugging to abandon at 2,130 feet; John O'Neal's No. 1 Waggoner, Section 31, oil sand swabbing 300 bbls. at 1,930 feet; Panhandle Oil & Refining Co.'s No. 2 Waggoner will be abandoned at 2,015 feet; Pathfinders Syndicate's No. 5 Burnett has set 6⅝-inch casing on sand and will test at 1,410 feet; No. 9 Burnett, oil sand at 490 feet showing about 15 bbls.; Planet Petroleum Co.'s No. 7-A Waggoner, sanded up and cleaning out on top of the oil sand at 1,425 feet; Rio Bravo Oil Co.'s No. 1 Waggoner, oil sand at 1,950 feet, swabbing around 40 bbls.; Shamrock Oil Co.'s No. 6 Waggoner, oil sand at 1,935 feet, flowing 600 bbls. and will drill deeper; Sims and others' No. 9 Burnett is moving in a drilling machine and has set 6⅝-inch casing at 1,409 feet; Skelly Oil Co.'s No. 1 Waggoner, drilling in a water sand at 1,970 feet; Sooner Oil Association's No. 5 Roberts, testing a sand at 1,603 feet that is showing around 75 bbls.; Wichita Petroleum Co.'s No. 74 Burnett, oil sand swabbing 400 bbls. at 1,935 feet.

**Wilbarger County**

Burton & Armstrong's No. 1 Wharton is shut down for orders, may shoot at 2,100 feet; Laughlin and others' No. 1 Waggoner is shut down for pipe at 875 feet; Noble Oil Co.'s No. 1 Thompson, drilling at 3,130 feet; Pen-Burk Oil Co.'s No. 1 Hart, pulling casing at 2,625 feet; Tex-Wyoming Oil Co.'s No. 1 Zipperly has a gas sand at 1,420 feet, total depth 1,475 feet.

This south section of the north Texas Field has just passed through one of the

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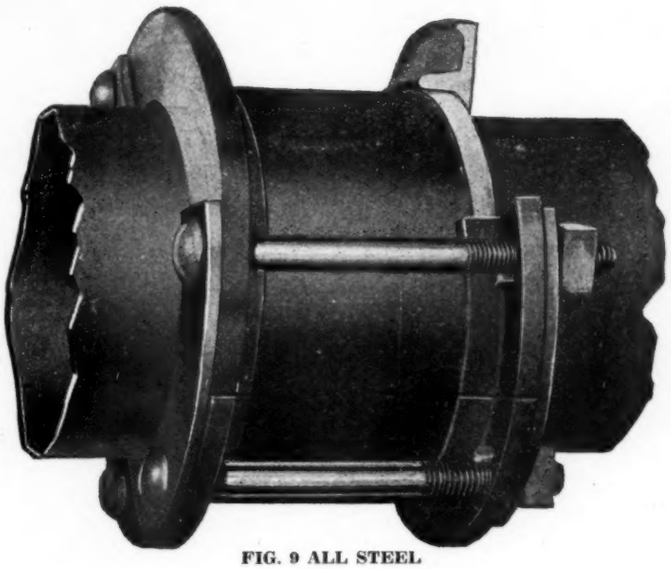

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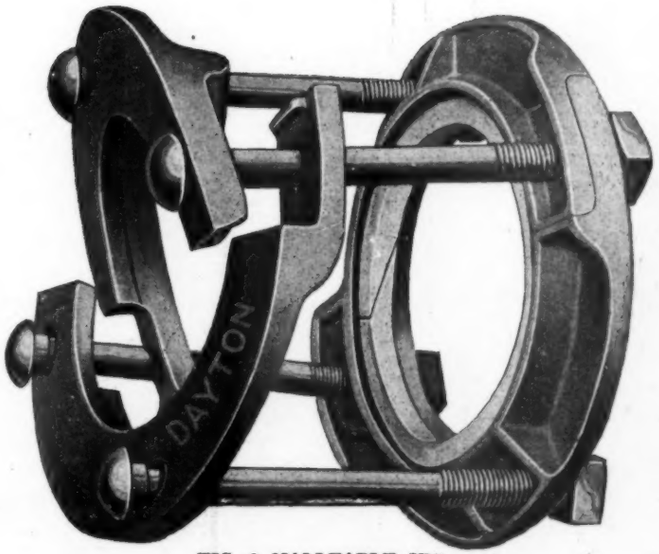


FIG. 9 MALLEABLE IRON

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most quiet weeks it has experienced since the beginning of the present year. The Eastland Pool and adjacent territory reported not one completion of any importance and the drilling development has slowed up to a considerable degree. In no field has the low price of crude been felt as little as at Pioneer. The reason for this is found in the high quality of Pioneer crude and the small premium that is being paid for a small per cent of the production. While the railroad strike has hampered the delivery of supplies and equipment to this field, yet there has been no great curtailment of operations. Wells under way, which number nearly 60, are going steadily ahead. In the eastern part of this field a new extension is indicated by the showings of oil found in two wells approaching completion.

The Humble Oil & Refining Co.'s No. 1 Dill, reported as drilling at about 2 000 feet, should be completed within the next 10 days, as also should the Sims Oil Co.'s No. 1 Len Irvin, which is underreaming at 2.050 feet. The Humble Oil & Refining Co.'s well is about 4 miles northeast and the Irvin is, perhaps, 3 miles almost due north of present production. Herrick's No. 1 Kersch is drilling below 1.800 feet. Operators and drilling contractors seem confident because the structural conditions in this extension are similar to the logs of the several wells that are producers to the south, and that the field to the northeast will develop into the extension of the present field, extending the field from the Armstrong and the Brannin leases. Geologists are of an opinion that drilling may open up even greater wells than have been found in and about the town of Pioneer.

Production during the past two months has been falling off some, though not spectacularly. The curtailment of drilling with the consequent decrease in the number of new wells has, no doubt, figured to a large extent in this decline in yield, in that flush production has not kept up the pace set when the field was in a constant state of activity. A slump of 25 per cent in operations, according to operators familiar with the field, has been registered as the result of the decrease in the price of oil. Estimates place the total production of dry-gas wells in the field at 50.000.000 cubic feet daily. It is estimated that each of the 73 oil-producing wells is producing approximately 100.000 cubic feet of wet gas daily, or a total for all the oil wells of approximately 7,300.000 cubic feet of gas daily. This gives the field a total gas production of 57,300,000 cubic feet daily.

The gas from the wells called dry gassers shows on test about 1 gallon of gasoline to every 1.000 cubic feet of gas. The gas from the oil-producing wells tests 2½ gallons of gasoline to every 1,000 cubic feet. This gives the field at present a production of 50.000 gallons of gasoline from the dry gassers and 18,-250 gallons of gasoline available from the oil-producing wells.

Some extent of the significance of the casinghead gasoline plant industry in a field such as the Pioneer Field is found in a comparison of the returns that may be expected from it and the returns from the crude oil output of the field. At present the Pioneer Field is producing an average daily total in excess of 8,000 bbls. of oil. At the posted price of $1.50 a bbl. this means a gross return of more than $12,000 daily from the oil.

It is seen that the present estimated output of the field of 68,250 gallons of gasoline daily from the gas flow, would amount to approximately $11,000 gross returns if the gas were being run through absorption plants, and that it is worth about as much as the oil produced in the field at present. There seems to be no reason to believe that the ratio of gas to oil as it at present exists in the field will change with future developments.

Wells reported as completed during the past week are: The Brown Oil Corporation's No. 2 Eakin, 60 bbls. at 2,452 feet; Cohen and others' No. 3 Rose farm, 70 bbls. at 2.503 feet; Duquesne Oil Corporation's No. 8 Smith, 60 bbls. at 2,512 feet; Sims Oil Co.'s No. 1 Moore, 120 bbls. at 2,505 feet; Southern States Oil Co.'s No. 1 Pioneer, 50 bbls. at 2.505 feet; Donley Drilling Co.'s No. 8 Martin, 5 bbls. after a shot at 3.375 feet; Gordon Petroleum Co.'s No. 1 Eastland, dry at 3,410 feet; Root and others' No. 3 Gibson, 15 bbls. at 1.697 feet, and States Oil Corporation's No. 3 Martin, 5 bbls. at 3.355 feet.

The drilling conditions of the several important wells in the county are reported as follows: Paul Ache's No. 1 Pioneer, fishing for casing at 2.503 feet; Burleson and others' No. 1 Not Grass was shot four times and responded with only a small showing of oil, total depth 3,204 feet; Drury Petroleum Co.'s No. 4 Pioneer, drilling in shale at 2.000 feet; Duquesne Oil Corporation's No. 4 Hill has a showing of oil and gas at 2.473 feet, will drill deeper; No. 6 Smith is fishing for a bailer and flowing some oil at 2,475 feet; Empire Gas & Fuel Co.'s No. 1 Ekin, at 2,416 feet, is showing 5,000,000 cubic feet of gas and will drill deeper; Harris & Fisher's No. 1 Ekin is drilling shale and soft rock at 2,335 feet; Invincible Oil Corporation's No. 1 Noren has a showing of gas and oil and drilling at 2,480 feet; No. 2 Nelson was shot at 2,460 feet with no results; Maymock Oil Co.'s No. 2 Pioneer has a small flow of gas and is drilling at 2,455 feet; McCamey and others' No. 9 Armstrong, drilling in shale at 2.050 feet; Pathfinder Oil Co.'s No. 1 Moore, drilling at 1,380 feet; No. 2 Moore, drilling at 1,280 feet; No. 3 Moore, drilling at 1.370 feet; States Oil Corporation's No. 3 Smith, drilling at 1,850 feet; Sweeney and others' No. 1 Pioneer, drilling in brown shale at 1,730 feet; Texas Pacific Coal & Oil Co.'s No. 2 Brown is having casing trouble at 2,360 feet; No. 1 Scott-Brelsford is underreaming at 2,200 feet, total depth 2,475 feet; Associated Oil Co.'s No. 1 Dountain is cleaning out at 3,325 feet; Cardinal Oil Co.'s No. 3 Brown is fishing for casing at 3.455 feet; Cardizone Oil Co.'s No. 1 Lathem is setting 6⅝-inch casing at 3,105 feet; Donnelly Drilling Co.'s No. 2 Burkett is cleaning out at 3,130 feet; No. 4 Martin has casing trouble at 3.235 feet; Humble Oil & Refining Co.'s No. 2 Harris is cleaning out at 3.000 feet; New Southern Oil Co.'s No. 3 Bumgardner is cleaning out at 3,330 feet; Plateau Oil Co.'s No. 10 Neus has 2,000.000 feet of gas and 10 bbls. of oil at 1,350 feet; this sand will be thoroughly tested before deeper drilling; States Oil Corporation's No. 4 Martin is cleaning out at 3.215 feet; No. 2 Carter is cleaning out at 3.612 feet, and Yates Oil Co.'s No. 2 Burkett is cleaning out at 3.220 feet.

### Stephens County

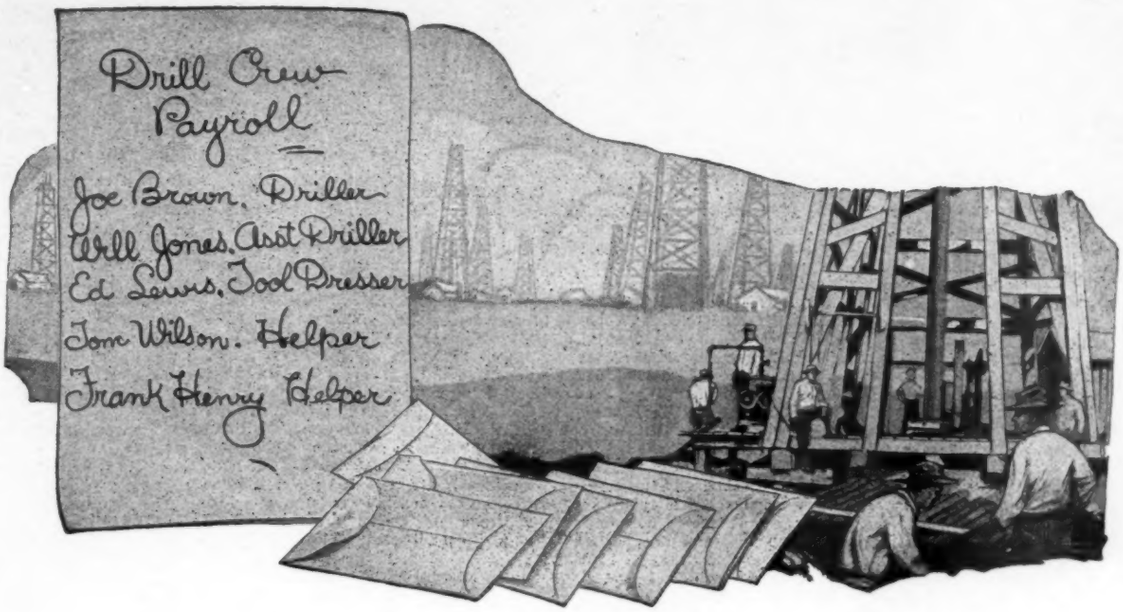
Completions that show for only small initial production, several tests that have been shut down for orders and a daily production run of 37,360 bbls. tells the story of this field for the past week. While for many weeks there has not been any new wells that have meant much in the way of initial production, reports show the daily average production is holding up about the same, showing the dependability of the producers brought in months ago. For several months the daily average production has run around 40,000 bbls.

In the Eliasville territory, no new work is being started, although no wells have been closed down on account of the price slump. Elsewhere, in several sections of the county, there has been a general shutting down of drilling wells. The Mid-Kansas Oil & Gas Co., the biggest operator in north Stephens County, is continuing work on all its drilling wells, but has postponed the spudding in of two or three new wells. The Ben Ross and others' No. 1 Cotton, west of Eliasville, has reached a depth of 3.505 feet. The deep test in the south field, being drilled by the Mid-Kansas Oil & Gas Co., the No. 9 G. W. Hill has reached a depth of over 3.600 feet in an 8-inch hole. The Mid-Kansas will make another deep test with the Pink Smith well recently drilled in as dry.

The Panhandle Oil & Refining Co.'s No. 1 Martin, north of Eliasville, will be plugged and abandoned. This well was plugged with 800 feet of casing in the hole. Failure to pull the casing and shut off the water was the cause of the abandonment. This test was one of the important wells in the district and its abandonment will cause considerable discouragement in that section.

Only one producing completion is reported for the past week. The Fensland Oil Co. completed No. 8 Brown for 250 bbls. after a shot at 3,150 feet. Several dry and abandoned holes are reported. The Magnolia Petroleum Co.'s No. 2 Van Winkle, dry at 3.415 feet; Mid-Kansas Oil & Gas Co.'s No. 1 Lee, 4,000,000 feet of gas at 3.245 feet; Miller Brothers' No. 1 Gurney, dry at 3,890 feet; Paramount Oil Co.'s No. 1 Nashburn, dry at 3,410 feet, and Prairie Oil & Gas Co.'s No. 1 Gordon, dry at 4,525 feet.

Status of the different drilling wells in the county are reported as follows: Agnew and others' No. 1 Hudspeth is fishing for a bailer at 1,600 feet; Dawson & Davis' No. 1 Couger, drilling deeper in lime at 3,505 feet; Benson & Spruck's No. 1 Black, shut down for fuel at 2,195 feet; Drake Oil Syndicate's No. 1 Drake, shut down for water at 2,600 feet; Gulf Production Co.'s No. 2 Langford, fishing for tools at 3,405 feet; No. 2 Moore, joining on 5-inch casing at 3,118 feet; Hellenic Oil Co.'s No. 1 Burgess, shut down with hole full of water at 2,950 feet; Illindia Oil Co.'s No. 3-A Walker-Caldwell, set 8-inch casing at 2,300 feet and is drilling at 2,340 feet; Johnson Oil Co.'s No. 1 Jones, drilling in hard shale at 2,505 feet; King, Booth and others' No. 1 Brown, shut down for 6-inch casing at 2,850 feet; Little and others' No. 1 Humphrey has a show of gas and 400 feet of oil in the hole at 3,365 feet; Magnolia Petroleum Co's No. 10 Rush, drilling at 1,655 feet; Mahlstedt & Mook's No. 8 Baker-Gannon, drilling in shale at 2,685 feet; Maryland Drilling Co.'s No. 1 Atkins, drilling in lime and shale at 3.205 feet; Mid-Kansas Oil & Gas Co.'s No. 9 Hill, drilling in a lime formation at 3,505 feet; Pay-Tex Oil Co.'s No. 3 Lane, fishing for casing at 3,110 feet; Pennock Oil Co.'s No. 1 Moore, drilling at 2,100 feet; Prairie Oil & Gas Co.'s No. 1 Adams, shut down for a shot at 3 800 feet; No. 1-C Corbett, drilling at 3,230 feet; Quakins Petroleum Co.'s No. 6 Harmon, drilling in hard rock at 2.370 feet; Rosser and others' No. 2 Shipley, fishing for casing at 3,150 feet; Roxana Petroleum Co.'s No. 2 Norton has a strong flow of gas, will probably be comp'eted as a gas well at 3.340 feet; Snowden & McSweeney's No. 3 Ashburner, drilling at 2.250 feet; No. 2 Jones, drilling at 2,830 feet; Texas & Pacific Coal & Oil Co.'s No. 23 Saterfield, drilling at 3.860 feet; No. 3 Veale, running 6-inch casing at 2.505 feet; Texas-Ohio Syndicate's No. 1 Stribbling, shut down from casing trouble at 3.565 feet; Texas-Oregon Independent Oil Co.'s No. 1 Jones, shut down to plug at 3.410 feet; Virginia Oil Co.'s No. 1 Saunders, shut down for fuel at 2.515 feet; Wilkinson & Baker's No. 1 Parks, shut down for 10-inch casing at 1.130 feet; Winters Oil Co.'s No. 1 Lee, drilling deeper in lime and shale at 3.190 feet; York & Bateman's No. 1-B Salome, straightening a bad hole at 3 350 feet; The Texas Co.'s No. 17 Black Brothers, drilling in shale at 2 360 feet; No. 9 Curry, bailing water at 2.000 feet; No. 11 Day, drilling in blue shale at 2.000 feet; No. 1 Fite, drilling in hard gray lime at 1.105 feet; No. 3 Heatley, underreaming 8¼-inch casing at 2.500 feet; No. 3 Huston, drilling in lime at 1,285 feet; No. 9 Louderdale, drilling in hard lime and showing about 4 bbls. of water at 1,250 feet; No. 32 Parks, running casing at 2,050 feet; No. 1 Searcy, drilling in hard gray lime at 1.870 feet; No. 2 Wilson, drilling in black lime at 3.460 feet; No. 28 Parks, running a hollow reamer at 2.340 feet; No. 31 Parks, bailing water and cleaning out at 1,390 feet,

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**Young County**

While there is considerable curtailment of operations in Young County, on account of the slump in the price of oil, it is one of the most active fields in Texas. The Herron Field is the most active in Young County, with Bunger second. There is considerable wildcatting in all sections of the county, but the principal production is at South Bunger, Oil City (Grimshaw) and Herron City.

A wildcat test, miles south of Graham is showing for some production and gives promise of being a good producer. The well is the Hallmack Oil Co.'s No. 1 Hall. Pay was found at 4,175 feet, very deep for this section of the field. The well is estimated to be making around 3,000,000 cubic feet of gas and some oil. It is said to have flowed several heads since the pay was hit. If this proves a good producer, it will open up a considerable stretch of territory between the the town of Graham and the older producing districts.

From Herron City comes the report that the test of the Tuloma Oil Co.'s No. 1 Graham, 2 miles north of that town, has 2,000 feet of oil in the hole. The well is estimated at several hundred barrels, producing from a depth of 4,240 feet.

Completions for this county are recorded as follows: The Ligon Oil Co.'s No. 4 Whittenburg, 125 bbls. at 1,863 feet; Penn Cities Oil Co.'s No. 2-B Herron 200 bbls. at 2,385 feet; Pomona Valley Oil Co.'s No. 1 Hughes, 8,000,000 cubic feet of gas at 2,370 feet, and Simons and others' No. 1 Herron, 275 bbls. at 2,385 feet.

Conditions of the different drilling tests for the past week are: Bertrand and others' No. 3 Whittenburg, drilling at 960 feet; No. 1 Wergess, drilling in lime at 2,780 feet; Buchanan and others' No. 1 Whittenburg, drilling at 1,795 feet; Collett & O'Keith's No. 1 Greendale, top of sand showing oil and gas at 1,925 feet; Crawford and others' No. 1 Kissinger, at 3,025 feet, has a sand showing oil and gas and will drill deeper; Elk Basin Oil Co.'s No. 10 Driver, 1,000 feet of oil in the hole at 1,880 feet; Foster and others' No. 1 Durham has a show of oil in gray lime at 3,850 feet; No. 2 Mahoney, shot with 80 quarts at 2,150 feet responded with an estimated production of 75 bbls.; Gulf Production Co.'s No. 2 Grantham, drilling in shale at 2,665 feet; McKenzie's No. 1 Greenway, shot with 270 quarts, no results, 3,975 feet; Mahlstedt & Mook's No. 3-B Williams, sand showing oil and gas at 2,450 feet; Mann and others' No. 4 Whittenburg, oil and gas showing in a sand at 1,865 feet; New Domain Oil Co.'s No. 2 Lynn, estimated production 100 bbls., sand depth 2,650 feet; Stovall and others' No. 1 McGow, shot with 90 quarts, no results, 2,170 feet; Panhandle Refining Co.'s No. 18 McCluskey, oil and gas sand at 2,595 feet and shut down for orders; Pitzer & West's No. 2 Costello Brothers sand at 1,830 feet, showing oil and gas; Ralco Oil Co.'s No. 2 Roark, sand at 3,820 feet, showed 550 bbls. initial in 24 hours; Reed and others' No. 1 Williams, 30 bbls. of oil and 2,000,000 cubic feet of gas at 2,453 feet; Roxana Petroleum Co.'s No. 1 McCluskey, fishing for 5⅛-inch casing at 3,725 feet; No. 2 Burgess, temporarily abandoned at 3,595 feet; No. 2 Payne, fishing at 4 025 feet; Southland Oil Co.'s No. 1 Ribble, shot with 90 quarts at 3,670 feet, but no response; Tyrrell and others' No. 10 Williams, trying to mud off gas sand at 2,398 feet; Union Oil Co.'s No. 2 Askew, fishing for 10-inch casing at 1,805 feet; No. 1 Lynn, trying to shut off water at 3,325 feet; Whitehead and others' No. 2 Herron, sand showing some oil and gas and will probably be shot at 2,565 feet; Young County Drilling Co.'s No. 1 Foster, preparing to shoot at 3,022 feet.

**Wildcats**

Brown County—One completion, a dry hole, is reported from the Brown County Field. The Gladys Belle Oil Co. has abandoned as dry its No. 1 Grantham at 2,240 feet. Drilling tests reported are: Bailey and others' No. 1 Cleveland, underreaming at 1,485 feet; Brownwood Producing & Refining Co.'s No. 5 Williams, shot with 100 quarts, showing about 20 bbls. of oil, will probably be shot again, total depth 1,770 feet; Kreb and others' No. 1 Starr, underreaming 8-inch casing at 1,850 feet; Gilham and others' No. 1 Fomby, setting 8-inch casing at 1,780 feet; Kirkpatrick & Lamb's No. 1 Helms, set 6⅝-inch casing and drilling at 2,840 feet; Preston Petroleum Co.'s No. 2 Cox, drilling in shale at 1,465 feet; Stout and others' No. 1 Fomby, pulling casing to shoot at 2,447 feet, and Williamson Oil & Gas Co.'s No. 2 Cox, drilling at 1,470 feet.

Callahan County — Completions reported for this county are: Lyon and others' No. 1 Baird heirs, dry at 2,600 feet; Callahan Oil Co.'s No. 1 Woody had a small show of oil and is shut down at 1,175 feet; Dudley Oil & Gas Co.'s No. 1 Moore is drilling at 1,410 feet; Stone & Co.'s No. 1 McDermitt, drilling in shale at 1,835 feet, and Texas Midland Petroleum Co.'s No. 1 Midland is shut down for further orders at 3,880 feet.

Mitchell County—This wildcat section of the field is showing considerable new development. Several new companies have purchased leases and are moving in tools and building derricks. A scarcity of water is the principal obstacle to an intensive development. The Underwriters' Oil & Refining Co. was delayed several hours by the blowing up of the boiler at the No. 2 T. & P. test. No one was injured by the explosion.

The Colorado-Tex Petroleum Co.'s No. 2 Foster has a fishing job at 2,595 feet; Daniels and others' No. 1 Lasure is drilling in rock at 2,645 feet; Magnolia Petroleum Co.s' No. 1 Foster is drilling at 625 feet; Maxwell & Johnson's No. 1 Jones is drilling at 910 feet, this test had a showing of gas at 768 feet; No. 1 Stewart is drilling with a show of oil at 2,670 feet; Reno-Tex Oil Co.'s No. 1 Conway is preparing to abandon at 3,238 feet; Underwriters Oil & Refining Co.'s No. 1 Coleman, fishing at 2,400 feet; No. 1 Smith, shut down fishing for tools at 2,435 feet; No. 2 T. & P. is drilling deeper in lime with no showing at 3,170 feet, and Western Petroleum Co.'s No. 1 Brennan, drilling in shale and lime at 3,275 feet.

Palo Pinto County—This east section of the deep lime field is receiving considerable play at this time. The Dalton Pool has several wells nearing the deep pay depth. Probably the test that is attracting the most attention is the Magnolia Petroleum Co.'s No. 1 Green. At 3,995 to 4,010 feet a sand was picked up showing both oil and gas. The test is now drilling in black lime around 4,100 feet. Harding and others' No. 1 Pennington is another test that is attracting considerable attention. Top of the pay sand was penetrated at 3,990 feet. It is showing around 2,500,000 cubic feet of gas and will be drilled deeper. McGar & Son's No. 1 Dalton, 1½ miles south of the discovery well, is shut down for a shot at 4,215 feet. On this same lease, Ross & Brooks' No. 1 is drilling by tools without any showing at 3,995 feet. Completions reported are: The Hart Oil Corporation's No. 4 Hart, 200 bbls. after a shot at 3,130 feet; Transcontinental Oil Co.'s No. 6 Lane, 80 bbls. after a shot at 3,245 feet, and No. 7 Lane, 70 bbls. at 3,120 feet. Important drilling tests are the Canadian Petroleum Co.'s No. 1 Pennington, drilling at 2,835 feet; Dalton & Clark's No. 1 Green, drilling in hard shale at 2,655 feet; Dalton Oil & Gas Co.'s No. 1 Dalton, drilling in hard lime at 3,410 feet; Hart Oil Corporation's No. 5 Hart is drilling in shale at 2,565 feet; Little Caddo Syndicate's No. 3 Hart is cleaning out at 3,268 feet; Nash & Windfohr's No. 1 Eubank is drilling in shale at 3,265 feet; Owen & Burkett's No. 1 Garey is drilling in shale at 3,120 feet; No. 1 Pennington is fishing for a bit at 4,230 feet; Upham and others' No. 2 Watson, shot at 4,160 feet and bridged at 3,000 feet and now drilling out bridge; Bankers Oil Corporation's No. 1 Lane is swabbing at 4,005 feet; No. 2 Lane is running 6-inch casing at 3,080 feet, and Delta Oil & Refining Co.'s No. 1 Caudill is drilling in shale and lime at 3,487 feet.

Shackelford County—Brown Oil Co.'s No. 1 Segwick is drilling in shale at 1,400 feet; Empire Gas & Fuel Co.'s No. 1 Brazzell is drilling at 1,150 feet; Ibex Oil Co.'s No. 6 Poindexter, drilling in lime at 3,640 feet; Illsing and others' No. 1 Gurney is a small producer at 285 feet, as is the No. 2 Gurney at 577 feet; Landreth and others' No. 1 Brazzell is drilling at 2,000 feet; No. 1 Witty is drilling in shale at 1,700 feet; No. 2 Witty is drilling at 1,460 feet, and Murphy & Bolenz's No. 1 Conrad is drilling in lime at 3,305 feet.

Archer County—Only one completion was reported in the Archer County Pool during the week. Several drilling tests are on top of sands showing production and these tests will probably be completed inside of the next week. The completion was The Texas Co.'s No. 5 Chance, 110 bbls. at 1,600 feet. Drilling operations include: The Texas Co.'s No. 6 Chance, drilling in gumbo at 1,205 feet; Alfalfa Petroleum Co.'s No. 1 Herron, drilling in shale at 725 feet; Everetts and others' No. 1 Veith, drilling at 1,415 feet; F. & H. Syndicate's No. 2 Ferguson, rigging up to pump at 1,440 feet; Kentucky Oil Association's No. 1-A Taylor, drilling at 1,000 feet; No. 4 Taylor, drilling at 1,580 feet; Carl Parker's No. 1 Morrison, drilling at 1,530 feet; Perkins and others' No. 3-B Haggard has set 6⅝-inch casing and cemented at 1,595 feet; No. 4 Haggard, standardizing on top of an oil sand at 1,597 feet; Staley and others' No. 5 Haggard, drilling in shale at 1,500 feet; Sullivan & Co.'s No. 1 Wilson, drilling in soft rock at 705 feet; Texhoma Oil & Refining Co.'s No. 27 Gose, nearing completion depth around 1,510 feet; No. 1 Netherton, bailing to test an oil sand at 1,590 feet, and No. 1 Young, drilling without any showing at 1,960 feet.

Clay County—The Texas Co.'s No. 45 Byers, fishing for tools at 640 feet; Gulf Production Co.'s No. 1 Worsham, running 12½-inch casing at 685 feet; Nebraska Oil & Gas Co.'s No. 1 Meyers, fishing for drill pipes at 2,700 feet; Lone Star Gas Co.'s No. 3-A Edwig is standardizing at 2,185 feet; No. 15 Stine, drilling in shale at 1,700 feet; No. 1 Miller, drilling in hard rock at 1,220 feet, and Ridley and others' No. 1 Hawthorn is ready to spud.

Montague County—Bowie Chief Oil Co.'s No. 1 Bobecker, waiting on cement to set before drilling deeper at 1,516 feet; Fowler and others' No. 6 Fowler, drilling at 505 feet; Petroleum Production Co.'s No. 1 Maddox had a show of gas and is shut down at 789 feet.

## THIRD DISTINCT SAND FOR KEMP-MUNGER-ALLEN POOL DISCOVERED, 200-BBL. WELL AT 1,620 FEET

WICHITA FALLS, Tex., Sept. 4.—A third distinct sand for the original Kemp-Munger-Allen Pool was discovered when the Prime Oil Co. brought in its No. 1 Munger, on the west side of the pool, making 200 bbls. at 1,620 feet. This well was started a few weeks ago when the Franklin-Daniel well found a 1,500-foot sand as the casing was being shot to pull. This well has been producing since that time, coming in for a 150-bbl. producer in the new sand. The Prime Co.'s well is in a still different sand. The original Kemp-Munger-Allen sand is found around 1,740 feet. The two new discoveries are expected to bring about a considerable revival in that district, which has been dormant for more than a year, as far as new drilling is concerned. Several new locations have already been made in the neighborhood of the new Prime well, including two for the Prime Co. and one for the Cline Oil Co. The Kemp-Munger-Allen Oil Co. is also planning a test for the new sand.

The shallow pool on the Nance tract, several miles northwest and across the river from the Kemp-Munger-Allen, reported its first completion in several months, it being the Ryan Petroleum Corporation's No. 8 Nance, a 50-bbl. well in the 1,400-foot sand.

**PRODUCTION REPORT**

**Week Ending September 1, 1922**

**Burkburnett**

| | | |
|---|---|---|
| American Refining Co | 420 | |
| Gulf Production Co | 1,420 | |
| Humble Oil & Refining Co | 900 | |
| Kansas & Gulf Co | 1,680 | |
| Magnolia Petroleum Co | 3,150 | |
| McMahon Oil Co | 700 | |
| Middle States Oil Co | 515 | |
| Oklahoma Petroleum & Gas Co. | 580 | |
| Panhandle Refining Co | 690 | |
| Ryan Petroleum Co | 450 | |
| W. G. Skelly Oil Co | 445 | |
| The Texas Co | 1,535 | |
| Texhoma Oil & Refining Co | 565 | |
| Miscellaneous | 16,200 | |
| Total | | 29,250 |

**Electra**

| | | |
|---|---|---|
| Gulf Production Co | 1,300 | |
| Griswold Oil Co | 1,310 | |
| Magnolia Petroleum Co | 3,250 | |
| Middle States Oil Co | 2,235 | |
| Planet Petroleum Co | 5,200 | |
| The Texas Co | 7,700 | |
| Miscellaneous | 4,950 | |
| Total | | 25,945 |

**Iowa Park, Holliday, Petrolia**

| | | |
|---|---|---|
| Gulf Production Co | 150 | |
| The Texas Co | 370 | |
| Griswold Oil Co | 50 | |
| Middle States Oil Co | 20 | |
| Panhandle Refining Co | 20 | |
| Ryan Petroleum Co | 60 | |
| Texhoma Oil & Refining Co | 1,160 | |
| Miscellaneous | 3,710 | |
| Total | | 5,540 |

**Stephens**

| | | |
|---|---|---|
| Gulf Production Co | 2,950 | |
| Humble Oil & Refining Co | 2,530 | |
| Magnolia Petroleum Co | 1,650 | |
| Mid-Kansas Oil Co | 5,300 | |
| Prairie Oil & Gas Co | 2,900 | |
| Sinclair Co. | 470 | |
| Sun Co. | 790 | |
| The Texas Co | 3,920 | |
| Texas & Pacific Co | 2,000 | |
| Miscellaneous | 14,850 | |
| Total | | 37,360 |

**Eastland**

| | | |
|---|---|---|
| Gulf Production Co | 715 | |
| Humble Oil & Refining Co | 100 | |
| Magnolia Petroleum Co | 470 | |
| Mid-Kansas Oil Co | 50 | |
| Prairie Oil & Gas Co | 1,160 | |
| Sinclair Co. | 1,050 | |
| Sun Co. | 50 | |
| The Texas Co | 465 | |
| Texas & Pacific Co | 1,370 | |
| Miscellaneous | 9,280 | |
| Total | | 14,710 |

**Other Fields**

| | | |
|---|---|---|
| Strawn— | | |
| Texas & Pacific Coal Co | 260 | |
| Miscellaneous | 1,710 | |
| Mitchell County— | | |
| Miscellaneous | 135 | |
| Coleman County— | | |
| Miscellaneous | 90 | |
| Brown County— | | |
| Miscellaneous | 650 | |
| Moran County— | | |
| Humble Oil & Refining Co | 515 | |
| The Texas Co | 200 | |
| Miscellaneous | 150 | |
| Humble Oil & Refining Co | 440 | |
| Magnolia Petroleum Co | 800 | |
| Mid-Kansas Oil Co | 300 | |
| Comanche County— | | |
| Prairie Oil & Gas Co | 80 | |
| Sinclair Co. | 70 | |
| Sun Co. | 20 | |
| The Texas Co | 235 | |
| Texas & Pacific Coal Co | 170 | |
| Miscellaneous | 10,000 | |
| Young County— | | |
| Gulf Production Co | 350 | |
| North American Refining Co | 320 | |
| Planet Petroleum Co | 270 | |
| Panhandle Refining Co | 140 | |
| Sun Co. | 130 | |
| The Texas Co | 620 | |
| Miscellaneous | 9,400 | |
| Total | | 27,255 |
| Total, all fields | | 140,060 |
| Total, last week | | 138,340 |
| Increase | | 1,720 |

Typical installation of seven De Laval Crude Oil Purifiers on an Oklahoma lease.

# De Laval Centrifugal Purification of crude is more economical on any lease

"Sooner or later you will use a De Laval"—and after it has proved its greater efficiency and economy you will not be satisfied until all your cut production is centrifugally purified.

That is the story of the installation shown above. Two De Laval Purifiers were installed as a last resort to handle the production of a well which other commercial methods had failed to bring to pipe line requirements. They did it easily and in off-days cleaned up the b.s. pond, paying for themselves in a few weeks on this work alone.

Then the owners of the lease realized that centrifugal purification would make other wells more profitable. Another De Laval was installed; then two more, making five machines in all, and finally an additional two, bringing the number up to seven so that the entire production of the lease could be more economically handled.

There is the proof that the efficiency of De Laval Purifiers in breaking up tight emulsions is equalled by their economy in purifying ordinary cut production such as is made on the average lease.

Bulletin No. 104 contains information which is of value to every oil producer and also tells about the patented method of applying centrifugal force which enables De Laval Purifiers to accomplish the "impossible." The coupon brings it.

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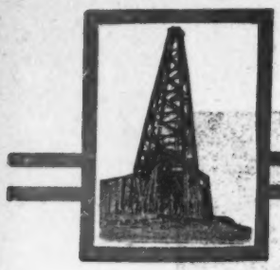


# East-Central Texas Field

*By RAY H. WHITNEY*

Seay & Cranfill well north of the Currie Pool, which is estimated at 1,000 bbls., is dividing the interest with the Humphreys gusher at Kosse. Both wells are shut in for tankage and pipe line facilities. The recent big wells have revived interest in East Central Texas and increased drilling will soon be evident.

MEXIA, Tex., Sept. 2.

Once again the limelight has been shifted in east central Texas, with the bringing in of a wildcat near the town of Richland, in southern Navarro County, and approximately 3 miles to the north of the Currie Field, which is now attracting considerable attention. This new excitement which is just to the south of the hamlet of Richland bids fair to rival that at Currie, Mexia and Kosse, and one thing is evident, and that is this portion of the State is going to recieve more attention during the months to come than any other district in the entire Lone Star State.

Operations outside of the Currie and Mexia Field have been going on for some time, but only gloom has been the result. After the much touted play in Kaufman County went awry, the producers gave up hope. They had no faith in the east central division, but today it looms up with greater promise than any other section.

The scene of the new excitement is around the West farm, where Seay, Cranfil and others drilled in a gas well last fall, that came in with a volume of better than 60,000,000 cubic feet, at approximately 2,975 feet. Other work that was started nearby proved of little good, and a number of dry holes were recorded, but the country had the earmarks of an oil pool, and it was decided that the mammoth gasser was not alone. It is an entirely different pool from that around the Meador well, three miles to the south.

A few months ago to the north of the No. 1 West rig, on a knoll, there was no developments, but the larger companies had all taken acreage and there is very little land around the new gusher that is not held at the present time. The new well is also on the West farm, but east of the original well a couple of locations and its initial production was first estimated at 4,000 bbls.; then reduced to 1,500 bbls., and now it is estimated at 1,000 bbls. The well was shut in for storage and pipe line facilities and no accurate gauge has been made of it. It has a big gas pressure and may make a larger producer than the current estimated figure.

The sand was tapped at 2,998 feet and drilling deeper was delayed on account of the enormous gas volume. A 2,400 pound pressure gate valve was insufficient to keep the oil and gas from coming through. Throngs of scouts and leasers have been at the well since it struck the top of the sand, which is the Woodbine. This is the first pool that has been opened that one will not find the Humphreys Oil Co. sitting around with all the acreage on the structure. It has none in the immediate vicinity, but the land is fairly well divided among the large companies and individuals, which will cause it to be developed much sooner than if one company owned it all.

Lease prices have gone out of sight and for 10 miles distant the leaser is grabbing up what he can find, but there will not be a great deal available as last fall there was considerable activity in all localities of Navarro County, and those who were fortunate enough to hold on will now reap a harvest. All the way from Richland to Corsicana land is leased and a great deal of activity can be looked for and the Richland district will possibly take away a lot of glory from the new Kosse Field, where operations are bound to be slow on account of the Humphreys Oil Co. holding the greater portion of the acreage.

### No. 1 Showing Oil

It will be remembered that the Seay-Cranfill initial well on the West farm the gasser has been showing oil for several months, its output being estimated at around 150-bbls. daily, which has been taken by The Texas Co. After the large gas pressure on this well subsided it started to show some oil and then was given the first thought that an oil pool might be developed.

Between this original gasser and the Currie Pool, a distance of three miles, there is a sprinkling of dry holes. The Tucker farm, just a mile north from the nearest Currie production was dry some months ago and the Panhandle Refining Co. drilled a duster on a portion of the West ranch that had very good indications, as well as other tests drilled close by. Just what direction the new pool will extend remains to be seen, but it looks very good northward toward Richland.

This development taken with that underway in nearby vicinity will cause southern Navarro County to be watched with interest during the next several months and other pools are looked for, as this county has all the indications that go to make up an oil field. Another test is being drilled by Seay & Cranfill on the West ranch, showing some gas around 2,970 feet, and it, too, looks like it may be in line for some good oil production. It is better than 800 feet east of the new oil well and if productive will prove up another nice batch of territory.

### The Currie Pool

There were a few interesting developments in the Currie Pool, also in southern Navarro County, and to the south of the new strike near Richland. The Gulf Production Co. has just finished its initial test on the Bounds tract, and it is reported good for 650 bbls. at the start.

For a while it looked as if the Cosden Oil & Gas Co. had a dry hole on the Bounds farm, offsetting the Longbottom lease to the north and west, but it is reported to have struck a new sand at approximately 3,218 feet and there is some fluid in the hole. The offset well on the Longbottom struck the sand at around 2,964 feet, but was drilled deeper after No. 2 got the sand at 3,001 feet, and came in for better than 1,000 bbls. It had been making around 200 bbls. before it was drilled deeper. A later test of the Cosden well will be interesting. North of this on the Bounds, the Houston Oil Co. had what looked like a dry hole, but with the deeper sand in the Cosden well, it will be drilled deeper. The Currie Field is now producing around 14,000 bbls. daily.

On the T. W. Bounds farm the No. 1 "Trapshooter" Riley is making around 500 bbls. daily. This operator is carrying on an active drilling campaign. The other companies have a number of wells on top of the sand and the Currie production is due for a nice increase. Over 50 rigs are now running in this pool and with the producing area looking very likely to the south and southwest some further extensions are looked for in the very near future.

The Homa-Okla Oil Co., the Newblock Oil Co., the J. K. Hughes interests, and Snowden & McSweeney are carrying on an active drilling campaign.

### More About the Kosse Strike

Although Kosse is filled to the guards with oil men, leasers, scouts and sightseers, there has been very little trading of any significance during the week, as the operators are going to use the watching and waiting policy before jumping in and investing large sums. The few pieces that were opened have all been gobbled up by the large companies and individuals and they are going to start an active drilling campaign, but not so with the Humphreys Oil Co., which has what looks like the cream of the acreage. This company will operate conservatively on account of conditions, and it can well afford to do so, as it has 6,000 acres that looks to be choice stuff.

It has been announced through F. Julius Fohs, of that company, that it will not be the policy of the company to drill the usual offset distance, but will drill at least 800 to 1,000 feet at a location, to conserve the drilling campaign that is bound to come later. Just at this time the Jones well has been capped in on account of the lack of storage. Earthen tanks were constructed, but they are filled with oil and the work of constructing two 55,000-bbl. tanks is now underway. The Humble, Prairie and Humphreys pipe lines are to lay lines to take care of the production and arrangements are pending with the Humble Oil & Refining Co. to lay 6 miles of pipe and connect with its main line. This will be used to take care of the Jones production until the Prairie and Humphrey lines are finished.

There are 15 derricks now going up around the various locations. The first derrick to go up in the field was that of the Kosse-Midwest Oil Syndicate, of which C. Andrade, of Fort Worth, is the head. The location is on a 5-acre tract, known as the Lula Garrett, out of the James Kerr survey, just 3,200 feet west and north of the Jones well. Spudding will start on this test at once. The Humble Oil & Refining Co., J. K. Hughes Oil Co., and the Roxana Petroleum Co. have taken a portion of the same tract and the prices ranged from $1,500 to $3,000 an acre, and some carried an overriding royalty. Mr. Andrade was fortunate enough to get his lease before the big excitement and therefore got away from the large bonus. The company which he heads is composed of Colorado stockholders.

Estimates on to how much the Jones well will make are still going the rounds, and one may hear all the way from a flash to 15,000 bbls. The pessimists who think the well is a "flash" will await the completion of other wells before investing their money in leases and drilling. It is said that the production is from the Edwards lime, which is of unknown quality, no production ever having been found in this formation. It has also been reported that the oil is from a streaky sand formation, in the lime, but the general opinion is that the oil is coming from the lime series, as the cutting above where the oil was found was saturated with oil.

It will do one thing and that is to cause a revival and deeper drilling in the surrounding area and it makes the Mexia Pool also look more inviting. It will take at least 40 days for the next well to be finished and then some line may be had on the trend of the pay. Just now the most likely trend is to the northeast and to the southwest. In the meanwhile the interest is divided between Kosse and the development near Richland, possibly the last named pool will get the greater play as more of the acreage is divided among a larger number of operators, and it is not so much a one company proposition as at Kosse.

It is certain that Kosse must not be overlooked as when a well the size of the Jones comes in there is bound to be a large amount of production in the immediate area, and if the 6,000 acres of the Humphreys Oil Co. is not all there is to the field, Kosse will be a more important field than Mexia.

### Will Drill Deeper at Mexia

In the Mexia field there was nothing of any special interest to report. What wells were drilled into the sand were but meager producers, with the exception of a 2,000 bbl. well by the Gulf Production Co. on the Sherrer farm, which was finished at a depth of 3,050 feet. The outside tests are not showing anything of special interest, although the producers have hopes for a revival since striking the new deep sand at Kosse. One thing is evident, and that is the Mexia Pool is due for some interesting developments during the months to come, with the striking of the new sand on the Kollman farm, by the Humphreys Oil Co. two weeks ago.

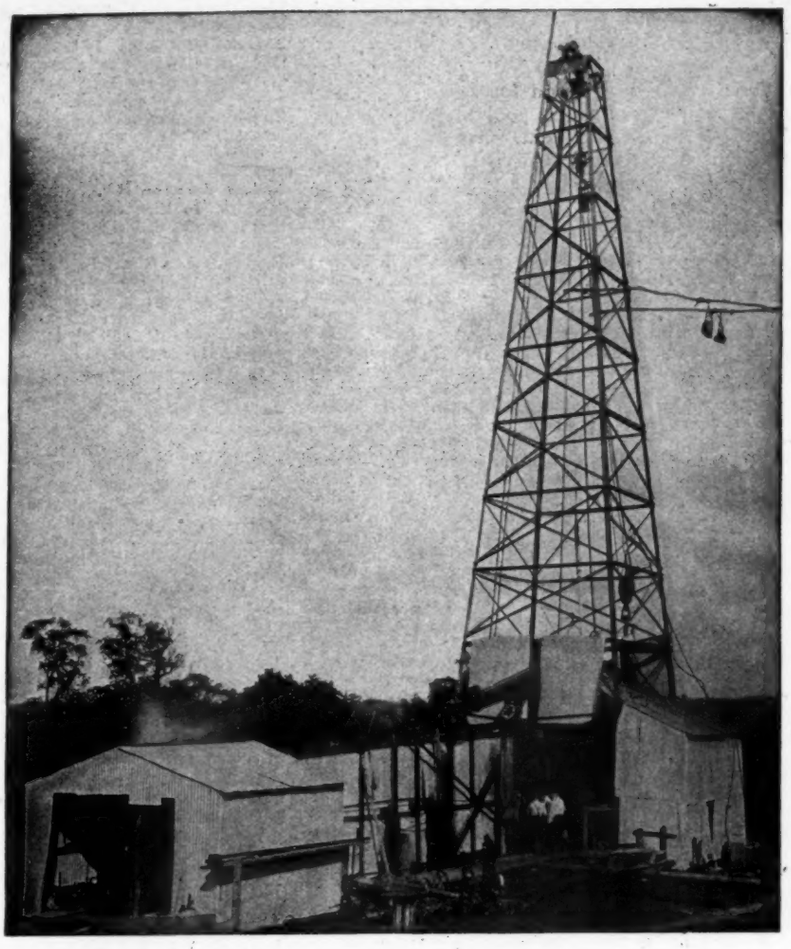
This new stratum, a lower member of the Woodbine, was uncovered at approximately 200 feet lower than the regular pay at Mexia and it will cause the deeper drilling of all the smaller producers, to the new pay horizon. The well was the No. 9, on the farm and while its production was only around 400 bbls. it is of a sufficient size to cause deeper drilling. There will also be some deeper drilling in the outside tests that have been given up as failures and Mexia is far from being a dead one at this time.

The daily production of the Mexia Pool is still approximately 70,000 bbls. daily and it is holding up remarkably well. The wells have settled to a large extent and there will not be a large depreciation for the time being. There is still around 3,000,000 bbls. of empty storage at Mexia and the producers can have their production handled without any trouble. The field to date has produced more than 30,000,000 bbls. of crude and those who are in on the inside are making a nice bit of money. The Humphreys Oil Co. still maintains a production around 25,000 bbls. daily, exclusive of the production at Kosse, where the worth of the well can not be truly estimated on account of no tankage or pipe line facilities.

The deep test now being drilled on the Berthenson tract by the Humphreys Oil Co. will be watched with interest, as it will not be a very long time until it is due in the sand where the Jones well is productive. Should this sand prove productive, the chances are that a vast output will be obtained and that the east central Texas district is to make itself felt as a producer of petroleum, there is no longer any doubt among the operators, who up to three weeks ago were very skeptical about the future of this area.

Crude oil in storage on August 25, in the east central Texas area, amounted to 16,500,000 bbls., in addition to about 1,110,000 bbls. of Healdton and Ranger crude.

# Structural Steel Drilling Rigs



***Dear Producers of Oil and Gas:***

Let us "make talk," as the Indians say when they start a pow-wow. Fourteen years ago, we invented a Structural Steel Drilling Rig that would drill a hundred deep Oil or Gas Wells and still be in condition. We are still making it and it has done the work. But some years ago, we discovered that the heavy rig needed a running mate, namely, a 60-foot pumping derrick, to take the place of the heavy rig when oil was found in the well. The combination works like a charm. The light derrick can be erected in three hours, and the heavy one moved on to the next location and in six hours it is all ready to drill another well; and so the good work goes on indefinitely.

Please do not be alarmed about the freight. Remember that "the wise men" and the raw material still come from the East, consequently we can lay down a rig in Oklahoma or Texas just as cheap as the other fellow. Ours comes direct from our works, and is not handicapped by commissions.

There is absolutely nothing new about a bolted rig: Corbett put one on the market in McKean County 40 years ago. It was a failure, owing to the difficulty of removing nuts from corroded bolts. The same difficulty hangs on like a leach today—with just one exception—**OH YOUNO!!!**

Our Drilling Rigs have been in use in every country on earth where Oil and Gas has been found. Therefore, they are no experiment, they are an established fact, and have come to stay. We can sell you a combination today, at a minimum of cost, that will produce a maximum of results. We know your every want; we have participated in them for 40 years. If you want in on this Combination, just order the

Yorke

**ASK**

**OHIO STRUCTURAL STEEL COMPANY, Newton Falls, Ohio**

**OR**

**YORKE DERRICK COMPANY, Washington, Penna.**

# Fields of the Central West

By WHIT

Well in Morgan County, Illinois, which is reported as showing good for 20 bbls. after a shot at 400 feet indicates the possible opening of an oil pool in that county. Completion at Centralia is making 140 bbls. at 775 feet. Gas companies doing considerable development work in Central Ohio fields with several good wells completed. Three completions in Indiana.

FINDLAY, Ohio, Sept. 4.

While there is no let up in development work in any section of the old Lima Field of northwestern Ohio, but five completions were reported for the week in review, averaging from 10 to 30 bbls.

In Eagle Township, Hancock County, Porter & Hovis drilled in their Nos. 1 and 2 on the Lem Aurand farm, Section 5, and they pumped 25 and 12 bbls. In Orange Township, same county, Kimmel, Broadwater and others' third well on the Z. T. Showalter, Section 4, pumped 20 bbls. In Bloom Township, Wood County, the Brennan Oil Co.'s No. 23 on the P. L. Donahey, Section 30, pumped 30 bbls. from 1,127 to 1,365 feet, or 238 feet in the Trenton. In Rice Township, Sandusky County, Watters & Simpson's No. 4 H. Strauch, Section 4, pumped 10 bbls. at from 1,365 to 1,410 feet. This is the fartherest east of any development in the old Trenton Rock Field.

As usual, the best completions emanating from the Illinois field comes from the pool located in the townsite and just outside of Centralia, in Marion County. Another little excitement is breaking out to the west and southwest of Springfield and near Jacksonville, in Morgan County, and reports from there are that the prospects are bright for the opening of a field in Morgan County. Rhodes & Moorehead have drilled in their second well on the Mahon farm, and at a depth of 400 feet it was given a shot and was reported by Mr. Rhodes as showing for 20 bbls. The formation is identical with that in the Centralia Field. According to Mr. Rhodes, the formation in the second well is the Pennsylvania formation which lies some 300 feet above the Niagra limestone, and deeper drilling, according to him, should be found at a depth of from 1,300 to 1,500 feet. The No. 2 well was located only eight feet from No. 1, but the oil is of a different gravity than in No. 1. No. 3 is expected to be started about a quarter of a mile west from Nos. 1 and 2, which will give the surroundings a fairly good test. Morgan County lies between the development work in Macoupin County, where some small wells were found and the McDonough County Field, where there was a heavy shallow drilling campaign several years ago. The supposition now is that a field runs from the northwest to southeast almost across the State, as many wells have been drilled along this line and several small pools have been developed. The Centralia Pool is on the line and the Colmar Pool, in McDonough County, is at the extreme northwest end of the development, with numerous small showings between Colmar and Centralia Pools, and the Morgan County well being one of the important showings.

Only two completions are reported for the week from the old Illinois Field, and both are in Honey Creek Township, Crawford County. The Mecca Oil Co.'s No. 3 S. S. Reinohl, Section 31, pumped 2 bbls. at 963 feet and James Pease and others' No. 1 L. N. Tohill, Section 31, pumped 1 bbl. In Centralia Township, Marion County, J. C. Boles' No. 2 Charles Roewekamp, Section 19, is estimated at 140 bbls. at 775 feet. Five Star Oil Corporation's No. 1 Julius Greathouse, Section 30, reported at 30 bbls. from 778 feet. Hefter, Joy and others' No. 2, Ed Gaston, Section 19, is showing for 60 bbls. at 775 feet. E. W. Wilson and others' No. 1 Matthews Estate, Section 30, is dry at 852 feet, and the Petro Oil & Gas Co.'s No. 1 Peter Moseley, Section 19, was dry at 797 feet.

In the Waterloo Field, in Waterloo Township, Monroe County, in southwestern Illinois, the Ohio Oil Co.'s Nos. 5 and 6, Gummerscheimer, Section 2, pumped 5 and 2 bbls. at 473 and 460 feet. Pure Oil Co.'s No. 5 John Acker, Jr., farm, Section 2, pumped 5 bbls. at 472 feet, while Harry Keener's No. 1 Jacob Weihl, Section 8, was dry at 647 feet. In Harter Township, Clay County, the Amber Oil Co.'s wildcat well on the J. N. Snyder, Section 36, was dry at a depth of 2,530 feet.

### Indiana

Only three completions were reported from the Indiana fields during the week and they were in the southwestern part of the State in the Princeton-Oakland City fields. In Center Township, Gibson County, the Peoples Petroleum Co.'s No. 3 M. Hollingsworth, Section 13, pumped 20 bbls. at from 1,425 to 1,441 feet. In Logan Township, Pike County, the Wiser Oil Co.'s No. 3 W. H. Phillips, Section 23, is reported at 40 bbls. In Curry Township, Sullivan County, the Hardin Oil Co.'s second well on the Clyde Alkire farm, Section 12, pumped but 1 bbl.

### Central Ohio

One of the busy spots of the Central West at this time, is the Central Ohio Field, where the gas companies are doing a large amount of new development work in hopes of increasing the volume of natural gas and the operators looking for oil in the shallow Berea pools are also busy. Work in Central Ohio has extended south into Meigs and Athens Counties, and tests are to be drilled in numerous other counties between Athens County on the east and Hamilton County on the west along the north side of the Ohio River, where leasing has been going on for several months. One of the first tests to be started in that area is the location just made for a purely wildcat well by the Ohio Fuel Supply Co., on the Scioto farm, Section 7, Bloom Township, Scioto County.

In Orange Township, Meigs County, the Logan Gas & Fuel Co. drilled a test well on the A. and S. A. Norris, Section 3, to a depth of 1,400 feet and in the Big Injun sand, which was dry. In Lebanon Townsite, same county, the Ohio Fuel Supply Co. drilled a duster on the Charles Barringer, Section 24, also a dry hole on the E. J. Henderson, Section 24. In Dover Township, Athens County, the Ohio Fuel Supply Co.'s test on the Sugar Creek Coal Co.'s land, Section 3, is reported showing 275,000 feet of gas. In Rome Township, same county, its test on the Mesh Baker, Section 25, and No. 2, on the John T. Jackson, Section 17, were both dry holes. In Coal, Township, Jackson County, the Ohio Fuel Supply Co. drilled a very small gas well in a second test on the Wm. E. Patterson, Section 35, and a fairly good gas well in a test on the J. E. Cammink, Section 24, Lick Township, same county. In Prairie Township, Holmes County, the Medina Gas & Fuel Co.'s second test on the Cora Smith, Section 32, was dry, as was the East Ohio Gas Co.'s No. 2 A. A. McCullough, Section 4. In Washington Township, same county, the Logan Gas & Fuel Co. got a dry hole in a test on the J. B. Miller, Section 34, and has started drilling a second test on the Lena Stitzel, Section 3. In Hardy Township, same county, the East Ohio Gas Co. is drilling No. 1 J. R. Forgey, Section 9. No. 1 Jacob Uhl & Sons farm, Section 11, and No. 1 Waldon Uhl 120 acres, same section, as well as making a location for a test on the Jacob Uhl 100 acres, Section 23. The same company is drilling No. 1 Henry Young and No. 2 Olive Smithisler, both in Section 7. Monroe Township, and in Knox Township, is drilling No. 1 W. H. Gray, Section 18.

In Benton Township, Hocking County, the Logan Gas & Fuel Co. drilled a fair gas well in No. 2 Sam Eveland, Section 17, and made a location for a test on the Thomas J. Burns 168 acres, Section 27, and is spudding at No. 1 Elias Dennis, Section 20. In Reading Township, Perry County, the Ohio Fuel Supply Co.'s test on the H. C. Mallick, Section 6, is a dry hole.

In Wilkesville Township, Vinton County, the Ohio Fuel Supply Co. drilled an average gas well in its No. 3 J. A. Newson, Section 10, is drilling Nos. 2 and 4 and made locations for Nos. 5 and 6 on the same farm. In Plain Township, Wayne County, the East Ohio Gas Co. has started the drill at a test on the Lyman Solliday 26 acres, Section 7. The Logan Gas & Fuel Co. is drilling No. 1 A. W. Tyler, Section 25, and No. 1 W. A. Pearce, Section 7. In Clinton Township, Vrooman and others' test on the A. J. Metcalf 80 acres, Section 18, is a light gas well. In Wayne Township, the Ohio Fuel Supply Co. has started the drill at No. 1 George Hutton, Section 7, and made a location for a test on the Franklin Miller 60 acres, Section 5. In Cannan Township, the Burtner-Morgan Co. drilled in a fair gas well at a test on the J. Oller, Section 15. The Logan Gas & Fuel Co. is drilling No. 1 William Sell, Section 17; Baker & Co. their No. 1 Ben Hill, Section 9, and the Reese Oil Co. its No. 2 I. D. Reese, Section 33.

In Wooster Township, Wayne County, the East Ohio Gas Co.'s No. 2 L. Greenwald, Section 31, is estimated at 10 bbls. In Chippewa Township, the same company has a nice gas well in No. 1 Willie Snyder, Section 28, while in Chester Township, Harmon and others have a light gas well in a test on the C. J. Mowery, Section 22. In York Township, Medina County, the Logan Gas & Fuel Co. has a light gas well in a second test on the M. Cook, Section 10, and is drilling No. 1 A. R. Stone, Section 16; No. 2 Levi Stone, Section 15; No. 1 Henry C. Speith, Section 3, and No. 2 Henry Bishop, Section 7. The Ohio Fuel Supply Co. drilled two good gas wells in No. 3 F. J. Mallert, Section 17, and No. 4 John Perkno, Section 10. Hulse & Koonts drilled a nice gas well in No. 4 Homer J. Hale, Section 8.

In Lafayette Township, Medina County, Hulse & Koonts drilled a good gas well in a test on the S. L. Smith, Section 3, and the Logan Gas & Fuel Co., a good one in a second test on the Mary C. Mohn 170 acres, Section 9. The Ohio Fuel Supply Co. has made a location for a test on the A. L. Collins 108 acres, Section 10, and for No. 1 M. & B. Diesch 20 acres, Section 10. In Liverpool Township, the Logan Gas & Fuel Co. has also drilled a good gas well in No. 3 Louis Nilges, Section 22. In Westfield Township, Medina County, the Logan Gas & Fuel Co.'s No. 1 W. E. DeLong, Section 5, is a light gas well, and Daugherty Brothers also drilled a light gas well in a test on the Louis Hortel, Section 10. In Harrisville Township, Starbird & Hower drilled a 1,000,000-foot gas well in a test along the C. S. and C. Railroad, Lot 120. In Medina Township, the Ohio Fuel Supply Co. drilled a dry hole in a test on the L. G. Arnold, Lot 63. The same company is drilling a test on the M. and M. Hardlick, Section 5, Hardy Township.

In Vermillion Township, Ashland County, the Logan Gas & Fuel Co. drilled two dry holes on the J. W. Harper, Section 9, and the W. W. Armstrong, Section 14. In Eden Township, Licking County, the Utica Gas, Oil & Mining Co.'s No. 1 Mary Neighbarger, Section 24, is dry. In Walnut Township, Fairfield County, the Logan Gas & Fuel Co.'s No. 1 M. C. Solliday, Section 25, is a small gas well. In Brown Township, Knox County, the Ohio Fuel Supply Co.'s No. 1 Amanda Frizzler, Section 24, is a very light gas well, and an average gas well was found in a test on the John Kline, Section 8. This company has made several new locations in the township. The East Ohio Gas Co. drilled a light gas well in No. 2 G. A. Butts, same township, and Remmahausen Gas Co.'s No. 1 D. T. Ross, Section 21, is a light gas well.

In Harrison Township, Knox County, I. G. Denbow and others' Nos. 4 and 5 George Miller, Section 23, are estimated at around 3 bbls. each; Snyder and others' No. 4 George Miller, estimated at 5 bbls., and Winland and others' No. 11 George Miller, same section, estimated at 3 bbls. Apple and others' No. 13 Mary McKee, Section 23, estimated at 5 bbls. In Clay Township, Knox County, Bell Brothers drilled a dry hole in No. 1 J. D. McCammett, Section 23. McCann & Son have a dry hole in No. 2 Cora Askley, Section 22, and Davisson and others one of the same kind in No. 1 McCammett, Section 23. J. W. Arrington and others' Nos. 11 and 12 Sperry-Brown, Section 3, are showing around 3 bbls. each, while Wisner and others' No. 5 W. B. Hancock looks like 4 bbls. In Brown Township, Knox County, the Upham Gas Co.'s Nos. 9, 10, 11 and 12 Harry and Mary Snively, Section 34, are credited with 6, 5, 3 and 7 bbls., respectively. The East Ohio Gas Co.'s Nos. 1 and 2, John Snively, Section 34, are credited with 6 and 10 bbls.

### Eastern Kentucky

In the Campton district of Wolfe County, the Petroleum Exploration Co. drilled in a dry hole on the Bush Heirs' farm, and started a well on the Charles Rose lease. In the Slade district, Powell County, the same company drilled a dry hole on the Robert Boyd farm, and a well estimated from 10 to 20 bbls. in No. 3 P. Y. Drake farm, and is drilling No. 4 on the same farm. In Morgan County, the same company drilled a couple of light gas wells on the Osborne Heirs' farm, and on the Osa McGuire farm. This gas will soon be placed in the line furnishing gas for Louisville and other points.

In the Johnson-Magoffin County Fields, the Eastern Kentucky Oil Co.'s No. 1 Cornelius Pickle farm, is a 1-bbl. producer, as is Myers & Lynche's No. 1 Charles McKenzie farm. Petroleum Ex-

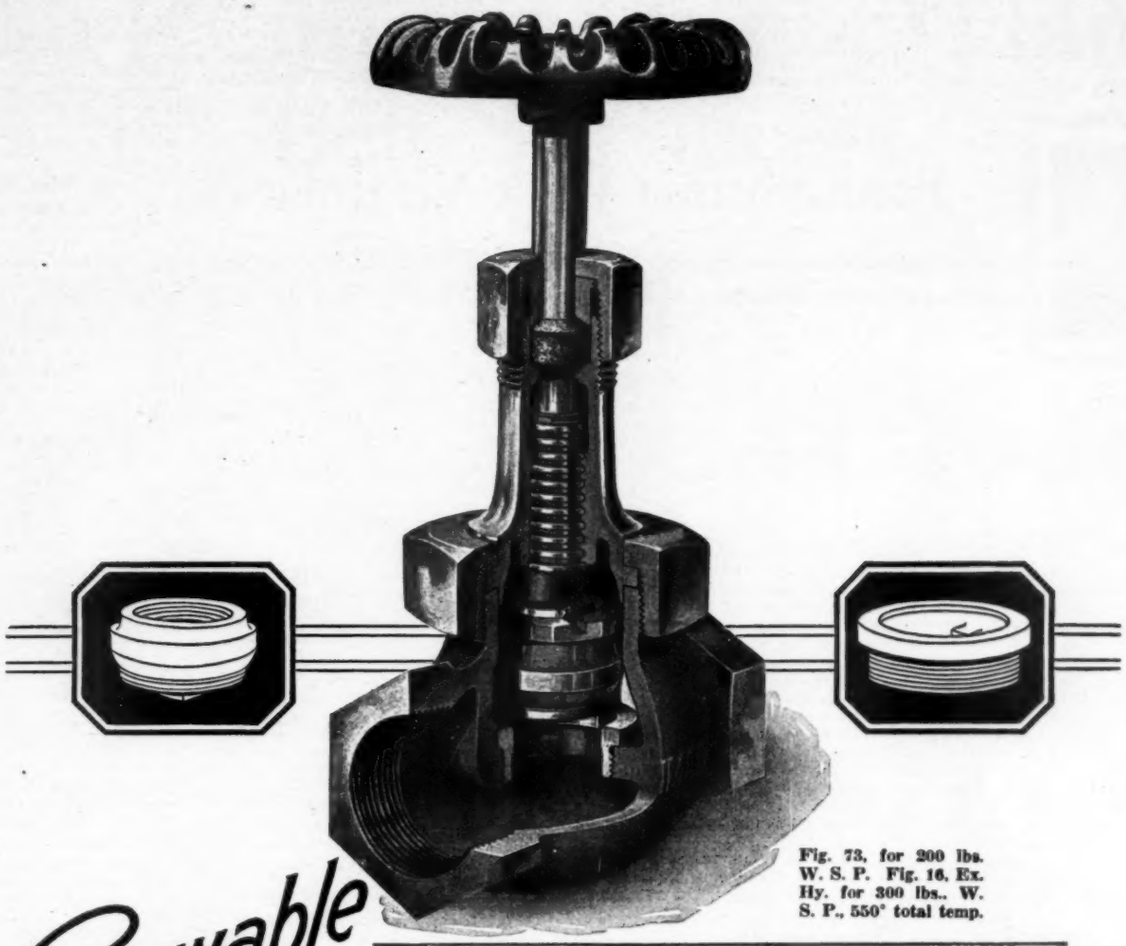


Fig. 73, for 200 lbs. W. S. P. Fig. 16, Ex. Hy. for 300 lbs.. W. S. P., 550° total temp.

Renewable "VALVE NICKEL" Disc and Seat

LUNKENHEIMER

"Renewo" Valves are the climax in the evolution of valve design from the old soft seat valve for low pressures to the present day high pressure and temperature valve.

The "Valve-nickel" **seat ring** and **disc** in "Renewo" Valves have unusual wear resisting qualities under extreme operating conditions. When wear does occur, the seating surfaces can be reground or the **seat ring** and **disc can be renewed.** With all other parts made of high grade bronze, formulated for the duty each part performs, the life of the valves is prolonged indefinitely.

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ploration Co.'s No. 12 W. S. Adams is reported at 20 bbls., with No. 13 and No. 1 on the W. S. Adams 20 acres drilling. Figley, Day & Co.'s No. 3 S. V. Skaggs is showing for 5 bbls. Petroleum Exploration Co.'s No. 11 W. S. Adams is reported at 5 bbls. This company has made locations for No. 3 Sam Collins and No. 1 Fred LeMaster farm, and is drilling No. 3 W. H. Collins. J. N. Meek drilled a 2-bbl. well in No. 2 Nova LeMaster farm, and is drilling No. 3. Stone and others are drilling No. 1 Ira Luster farm, and Stafford and McGuire are drilling No. 5 Elias Blanton. R. G. Gillespie is drilling a test on the John D. Moore and has made a location for a test on the Sam Blanton farm, and Myers & Co. made a location for a test on the Sebastian McKenzie farm.

In Breathitt County, the Petroleum Exploration Co. drilled a dry hole on the Chapman farm and is drilling No. 2 on the S. H. Hurst. The Continental Realty Co. is shut down at its test in the same field. The Petroleum Exploration Co. drilled a dry hole on the Sam Conley farm, in Carter County.

The runs of the Cumberland Pipe Line Co., through its gathering lines in the Eastern Kentucky fields for the week, handled a total of 83,265.32 bbls., for a daily average of 13,877.55 bbls.

# Pennsylvania-West Virginia

*By D. S. WAKENIGHT*

Southwest Pennsylvania, southeastern Ohio and West Virginia field operations are unusually dull, and the best well of the week was good for only 85 bbls. initial production. Practically no wildcatting because all the discovered structures have been tested and the inside work brings little results.

PITTSBURGH, Pa., Sept. 3.

The Eastern fields have been very quiet since they were reviewed a week ago. The number of completions in all fields were fewer and the new production far below any like period in a number of months. The best producers were not better than pumpers at the time of completion. In no section is there an effort being made to revive operations. West Virginia is falling behind in new work as well as in new production. During the month just closed there were 93 wells completed. Two-thirds of the number proved gas wells or dry holes. The new production amounted to but 389 bbls. With such results there is little incentive for operators to put forth any great effort to increase development work. The conditions in southeastern Ohio are but little better than in West Virginia. Operators in the deep territory continue to decline and but a few of the shallow sand districts show any activity.

### Gasoline Demand Good

Refiners in Pittsburgh and vicinity claim they are doing a fair amount of business on a small margin of profit. The demand for gasoline is very good and there is a rather remarkable increase in the demand for kerosene. All during last year this product was a drug on the market and the present increase in consumption is due to its substitution for coal. The same is true of fuel oil. There is no surplus stock on hand. Now that the coal miners are going back to work, the demand for fuel oil will slow down. Lubricants are moving at a slow pace. For some weeks many industries in Pittsburgh and vicinity have had to shut down on account of the coal strike.

The only change in market quotations during the week was the reduction of 1 cent a gallon on the tank wagon price of gasoline. Operators do not anticipate a further decline in the crude market, neither do they expect an early advance. Producers continue to hold their credit balances rather than sell at the present quotation.

### Late Developments

The result of development work in the Eastern fields during the past week was almost featureless. In the entire completed list there was not a well that had an initial production of 100 bbls., except possibly in the pool in Warren County, Pennsylvania, a short distance from Tidioute. Late reports from that section indicate that the pool has been encircled with dry holes. The discovery of this pool in a section that had been so long neglected, proved the sensation of the year, so far as it applies to the Eastern fields.

Nearly all of the work under way and starting is located in old territory and for the most part consists of drilling a well here and there when there is room. In fact, it is mostly on the routine order and if the wells do not fall to the duster list are not better than light pumpers. The average size of the 15 oil producing wells completed in the Southwest Pennsylvania fields during the month of August average a little more than six bbls. at time of completion. West Virginia had 42 completions and the average size about 9½ bbls. Southeastern Ohio made a better showing than either of the States named. The average of its 59 wells in the producing list was a little more than 14 bbls. Had it not been for the completion of several good producers in the deep sand territory the average would have been lower than either West Virginia or southwest Pennsylvania.

The search for new producing territory has for the time being become a lost enterprise. The wildcatter has gone out of business and there must be a substantial advance in the crude market to induce him to come back. It is doubted if he has any definite place in view to drill if conditions were improved. It is a pretty difficult matter to find a locality that has not had one or more dry holes drilled at some time in the past. West Virginia has more large tracts, only partly tested, than any other section in the Eastern producing area.

### Town Lot Well at Alexandria

The best well completed in the Southeastern Ohio fields is the Southern Oil Co.'s well on the Dalrymple Lot at Alexandrin, Jefferson County. It is showing for a 30-bbl. producer in the Berea grit. It is quite probable that this well will inspire a town lot development. The extension discovered some months ago to the northeast of the old Alexandria Field seems to be defined. The late wells completed have come in very light pumpers or dry holes. Some of the first wells completed in the extension had an initial production of 200 bbls.

The best the deep sand territory could do was to furnish a 30-bbl. producer, owned by the Nypenno Oil & Gas Co., located in Section 30, Ward Township, Hocking County. It is their No. 9 on the Cobb-Bradley farm. Coshocton and Licking Counties furnished light pumpers. The most promising territory is the extension west of New Lexington, Perry County. The Southern Oil Co.'s No. 4 on the Arthur and Isabelle McCourtney farm is still holding up at better than 100 bbls. a day. It was completed 10 days ago.

The Berea Grit Pool in Clay, Brown and Harrison Townships, Knox County, is the most active of any of the shallow sand districts. The wells average about five bbls. at time of completion and there are few dry holes. Drilling machines are used exclusively to put down the wells. In wells starting and drilling, Washington County is a close second. If it were not for the activity in the shallow sand districts, drilling operations in southeastern Ohio would be cut in half.

Two 15-bbl. pumpers, one located in Freeman's Creek district, Lewis County, and the other in DeKalb district, Gilmer County, were the offerings in the West Virginia fields. There were a number of completions in various districts, but none as good as the two mentioned.

The Southwest Pennsylvania fields made a poor showing, completing nothing better than very light pumpers. At Sheridan, 18th ward, Pittsburgh, a town lot development is getting into full swing. There are 7 wells drilling, some due in the sand, and 3 rigs up. The excitement at Unity Plum Township has subsided. There are 10 wells drilling and no rigs building.

### Week-End Completions

In the deep sand territory in southeastern Ohio, the Ohio Fuel Supply Co. and the Gordon Oil Co. at the close of the week saved the fields from making a very poor showing. In Section 27, Coal Township, Perry County, the first named company drilled through the Clinton sand and shot its No. 3 on the Franklin County Bank property, located 2,000 feet southeast of No. 1. The well produced 85 bbls. the first 18 hours. The first well on this property was completed last year and started at 200 bbls. a day. The second well was completed some months later and proved a failure. On adjacent leases test wells were drilled by other parties and came in dry. The Ohio Fuel Supply Co.'s No. 3 came in a good producer and makes the outlook for an extension to the southeast very promising.

Located in the northwest quarter of Section 23, Washington Township, Hocking County, the Gordon Oil Co. completed and shot its No. 3 on the William Stone farm. It produced 55 bbls. the first 20 hours. In Section 20, Starr Township, Hocking County, the Preston Oil Co. completed a second test on the F. J. Clark farm. It is a duster in the Clinton sand. In Franklin Township, Licking County, the Detex Oil & Gas Co. has started to drill a test on the Edward Catterman farm. This location is 1,400 feet north of the same company's test on the Bert Watson farm.

### Shallow Sand Wells

In Section 36, Jefferson Township, Noble County, Estadt & Co. drilled a test on the D. W. Williams farm through the Keener sand. It has been shot and is showing for a 3 or 4-bbl. pumper. In Clay Township, Knox County, Bell Brothers completed and shot in the Berea grit their test on the McCammet farm. It is a light pumper. In Cross Creek Township, Jefferson County, Wickersham & Co. have completed and shot in the Berea grit their test well on the Eliza Wickersham farm. It is good for 15 bbls. a day. In Section 2, Harrison Township, Muskingum County, the Carter Oil Co.'s test on the A. L. Harrop farm is through the Berea grit and is showing for a 5-bbl. pumper. This location is in territory that has been closely tested.

### West Virginia

The West Virginia fields rounded out the week of development work with light pumpers. At Alum Cave, Grant district, Ritchie County, S. T. Rutherford completed No. 23 on the West Virginia tract. It is showing for a 2-bbl. pumper. In Freemans Creek district, Lewis County, the Leading Creek Oil & Gas Co.'s second test on the P. H. Fahey farm, which showed for a 15-bbl. pumper in the Maxon sand, has now been drilled through the Big Injun and is a gasser with an estimated capacity of 3,500,000 feet a day. For the present it will be operated for gas only.

In the McClelland district, Doddridge County, Pentz & Shrader have drilled a test on the M. & Z. Underwood farm through the Big Injun sand and showing for a 5-bbl. pumper. In the same district, the South Penn Oil Co.'s test on the Milton Underwood farm is through the same formation and showing for a 4-bbl. pumper.

### Deep Test Abandoned

Far up on the mountain in Garrett County, Maryland, the Pittsburgh Syndicate has been forced to abandon its wildcat. At a depth of a little more than 5,000 feet the tools were lost and in an effort to recover them a second string stuck in the hole. They were not able to get it out and decided to abandon the whole business.

## THREE NEW OIL WELLS AND A GASSER AT TIDIOUTE

TIDIOUTE, Sept. 1.—Three good oil wells and a gasser, that extends the field about 1 miles east of the present development, were brought in here today.

The gasser is the Chase & Clinger test on the Wheelock farm and is called a "wonderful well" by local men. It tested 500 pounds pressure, and is good for about 1,000,000 feet of gas in 24 hours.

The other wells are two of the White Oil Corporation, and Carnahan's No. 17.

The two White wells are two to four feet in the sand. One has about 700 feet of fluid in the hole and the other is flowing. They are showing a strong pressure of gas. The wells are a few hundred feet up Siggins run from the first two of the White Corporation.

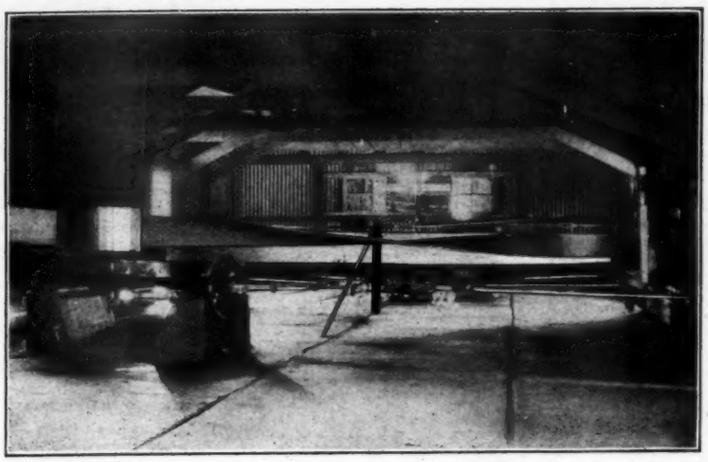
Carnahan No. 17, about 200 feet up the bank from White No. 1 was drilled a few feet in the sand and filled up to 800 feet in two hours. It is also a good gasser.

Carnahan No. 16, which was brought in yesterday, is the center of interest here today. The enormous gas pressure and the heavy flow of oil continued throughout the day. Attempts to drill it in deeper failed when the tools were forced from the hole by the pressure.

When the well came in the oil flowed over the derrick to a height estimated at 30 to 40 feet.

The gas pressure on this well, as has been the case with most of the other Carnahan wells, is immense, escaping with a deafening roar. The well flows at frequent intervals of about 15 minutes, filling the 4-inch pipe leading to the tanks at each flow, putting 30 to 40 bbls. into the reservoir each time. Carnahan No. 16 is in the neighborhood of 350 feet from Clinger No. 1, the first well drilled in the field and the one which opened up Warren County's great gusher pool.

# An Example of "Camel Hair" Belt Service—



**Prairie Oil & Gas Co.**
**Osage Jct. Power**

Driven by 10-inch Double Genuine "Camel Hair" Belt

This belt was installed December, 1914, and has been running continuously 24 hours a day ever since.

The crucial test of any product and the truth of any claims for it are, after all, proven on its performance on the job for which it is intended.

To the man who has not used a product, one actual demonstration of what it has done is worth a thousand statements of what it can do.

Every claim made for "Camel Hair" belt —every statement of its exceptional qualities and serviceability is based upon actual performance records.

Here, for example, is a 10-inch double "Camel Hair" Pumping Belt, installed on an Osage Junction Power of the Prairie Oil & Gas Company back in December, 1914.

Since then it has been driving the power and pumping wells continuously day and night—24 hours a day—and is still performing as efficiently as the day it was installed.

During all this time this "Camel Hair" belt has given no trouble whatsoever, and has operated day in and day out without requiring attention.

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# Gulf Coast Oil Operations

By P. L. McGREAL

Kirby Petroleum Co.'s No. 1 Richardson, which came in early last week at Barber Hill, flowing 2,000 bbls., went to water, later blowing in at 1,200 bbls. and then flowing 800 bbls. with choker set. Humble Oil & Refining Co.'s No. 3 Williamson at West Columbia cleared itself and is now making 800 bbls. Two failures were recorded for the west and north sides of the Hull Dome.

HOUSTON, Tex., Sept. 5.

An 800-bbl. well on the southwest side of the dome at Barber Hill, in Chambers County, a semi-wildcat district; a failure to extend the Orange Pool to the northeast, and two failures on the west and north sides of the Hull Dome were the features of the past week in the Gulf Coast region. The estimated daily average gross production shows a slight increase over last week, being placed at 107,675 bbls. daily, as of this date the Hull and West Columbia Pools both registering small increases over the preceding week. The estimate for each pool is as follows:

| District— | Bbls. |
|---|---|
| Batson | 1,190 |
| Blue Ridge | 1,225 |
| Dayton | 75 |
| Damon Mound | 3,100 |
| Edgerly | 370 |
| Goose Creek | 14,120 |
| Humble | 6,050 |
| Hull | 19,475 |
| Jennings | 485 |
| Markham | 65 |
| Orange | 16,300 |
| Pierce Junction | 1,410 |
| Spindletop | 830 |
| Saratoga | 1,680 |
| Sour Lake | 4,810 |
| Somerset and Piedras Pintas | 2,200 |
| Vinton | 3,700 |
| Welsh and Anse La Bute | 95 |
| West Columbia | 29,400 |
| Miscellaneous (includes Barber Hill) | 1,095 |
| Total | 107,675 |

At Barber Hill, a dome about 10 miles northeast from Goose Creek, the Kirby Petroleum Co.'s No. 1 Richardson, came in early in the week at 2,300 feet flowing 2,000 bbls., but soon went to water. A packer was set and Friday the well blew in making 1,200 bbls., but soon showed water again when a choker was set in the flow pipe and the well choked down to 800 bbls. per day. The location is on the southwest side of the dome. Mills Bennett and associates are bailing No. 2 Chambers County Agricultural Lands at 2,500 feet. It is located 1,200 feet south from the Kirby Petroleum Co.'s well. On the northeast side of the dome, The Texas Co. is drilling No. 1 Scott at 3,500 feet. Bennett and others have started No. 2 Japhet. Hindman and others (United Petroleum Co.), are working over some old holes on the Richardson, and starting No. 8.

The United Petroleum Co. has two pumpers there and that company and Bennett have another producer that has been flowing by heads since November last, making 80 bbls. per day now. Bennett and others' No. 1 Japhet is a pumper and the Humble Oil & Refining Co. has a pumper in No. 1 Fee, which with the Kirby Co.'s well gives the district a production of over 950 bbls. per day.

### Hull Pool

The Link Oil Co.'s No. 1 Revier bailed salt water at 2,095 feet and is being deepened. It is on the recently developed west side of the dome. More to the northwest, the Houston Production Co.'s No. 1 Abel was bailed without results at 2,200 feet and will be drilled deeper. The same company is now testing No. 9 Barngrover on the south side at 2,990 feet. On the same side, the Monarch Oil & Refining Co.'s No. 5 Harrison is making 300 bbls. on air at 3,275 feet. On the north side of the dome, the Yount-Lee Oil Co.'s No. 2 Merchant showed saltwater at 2,550 feet and is now drilling at 3,098 feet. On the east side, the Republic Petroleum Co.'s No. 35 Dolbear is on work over good for 200 bbls. at 2,050 feet and No. 11 Dolbear is testing at 2,200 feet, after being worked over.

Interest in this pool in confined to those wells drilling on the west and north sides of the dome, the other sides being practically defined. On the west side in particular, because of its newness, the Republic Production Co. is drilling No. 4 Hanna with a derrick for No. 5. The Gulf Production Co. is drilling No. 2 Hanna. The Humble Oil & Refining Co.'s No. 1-B Abel is below 1,000 feet and No. 1-A just starting. No. 1 Marshall is rigged.

On the north side, the Humble Co.'s No. 1 Taylor is at 2,235 feet. The Yount-Lee Oil Co.'s No. 3 Stengler is below 1,980 feet, and No. 4 at 1,980 feet. The same company's No. 2 Merchant is at 2,000 feet. F. H. Carpenter, trustee, is losing returns in rick in No. 2 Stengler at 1,450 feet. The Higgins Oil & Fuel Co.'s No. 3 Merchant is below 1,760 feet The Gulf Production Co.'s No. 9 Scarborough is deepening at 2,980 feet and No. 11 is below 1,456 feet. The Houston Production Co.'s No. 2 Abel is rigging up to start. The Fuson Development Co.'s No. 1 Pickett is around 910 feet. The Gulf Co. is deepening No. 15 Underwood. On the east side, the Republic Production Co. has a derrick standing for No. 56 Dolbear. On the south side, the T. W. P. Oil Co. is stringing No. 5 Carr, and the Empire Gas & Fuel Co.'s No. 2 Barrow is below 3,010 feet.

### Goose Creek

The Humble Oil & Refining Co. abandoned No. 48 Galliard in the Goose Creek Pool at 4,200 feet, and its No. 25 Peninsula flew out. Gulf Production Co.'s No. 11 Prather is a 200-bbl well at 2,060 feet, following a work-over. The Hisgen Petroleum Co. got salt water in No. 2 Scorrgea at 3,450 feet, and Perryman and others are bailing No. 4 Adey at 2,680 feet. They are on the west side of the creek. The Gulf Coast and Crown No. 36 Galliard bailed dry at 3,370 feet. The Goose Creek Petroleum Co. abandoned No. 9 Freeman out in the bay at 3,450 feet.

No. new work is starting in the pool and the bulk of such work as is now being done is on the west side of the creek in the new deep sand territory that the Gulf Co. developed in the spring. Here that company is drilling No. 3 Chapman-Bryan at 3,600 feet, and No. 4 at 2,090 feet. No. 6 Isenhour is below 4,100 feet. No. 1, out in Black Duck Bay, is at 2,675 feet, and No. 1 Hirsch also in the water, is at 2,345 feet. The Humble Oil & Refining Co. is sidetracking No. 2 Harrell, offsetting the Chapman-Bryan, at 2,500 feet with bottom of the hole at 4,350 feet. Location has been made for No. 3. No. 1-A Isenhour is at 3,900 feet, and No. 2 at 2,300 feet with No. 1-B Isenhour below 4,200 feet. No. 10 Beaumont Petroleum, in the bay, is drilling at 2,700 feet.

On the east side, the Humble Oil & Refining Co.'s No. 46 Smith is drilling at 4,087 feet. In the old part of the pool, its No. 25 Sweet is at 3,345 feet, and No. 32 Schilling at 4,100 feet. A derrick is up for No. 50 Galliard, but it has been standing for several weeks. The Crown Oil & Refining Co.'s No. 7 Gillette is at 1,235 feet. The Gulf Co. is deepening No. 7 Houston-Smith, and over on Atkinson island in the ship channel, back of Morgan's Point, the Ship Channel Oil Co.'s No. 2 is drilling at 875 feet.

### West Columbia and Damon

The Humble Oil & Refining Co.'s No. 3 Williamson on the northwest side of the West Columbia Dome, cleared itself during the week and is now making 800 bbls. of oil. Its No. 1 Badge is a gasser. The Texas Co.'s No. 77 Hogg is now flowing 1,000 bbls. at 2,850 feet. The Wichita Petroleum Co. is bailing No. 2 Smith at 3,490 feet. On the northwest side, The Texas Co.'s No. 8 Abrams is drilling at 3,675 feet, and No. 9 is showing some oil and gas at 3,423 feet. The Humble Oil & Refining Co.'s No. 2 Bullock-Nash is drilling at 3,245 feet, and it is rigging to work over No. 5 Robertson to the north of the Abrams tract. The Wichita Petroleum Co.'s No. 1 Helms is at 3,450 feet. The Kavanaugh Petroleum Co.'s No. 1 Nash is at 3,425 feet, with casing set and cemented. The Atlantic Oil Producing Co. is rigging No. 1 Wilson.

On the north side, The Texas Co.'s No. 72 Hogg is idle at 4,635 feet. No. 74 is around 4,500 feet, and No. 78 is at 3,200 feet. On the east side, same company's No. 31 Hogg is working over, as is the Humble Oil & Refining Co.'s No. 9 Japhet, and same company is drilling No. 34 Japhet at 3,540 feet. The Gulf Production Co. is working over No. 7 Eyres. At Damon Mound, 10 miles northwest from West Columbia, the Southern Petroleum Co. abandoned No. 1 Norton at 4,010 feet. The Sinclair Oil & Gas Co.'s No. 27 Bryan is being bailed at 1,540 feet, and No. 1 Mock is also testing at 3,120 feet. They are on the southwest side of the dome.

### Orange

The Republic Production Co. abandoned No. 1 Garner on the northeast of the Orange Pool at 4,315 feet. It is north of the county bridge and marked an attempt to extend the limits in that direction. The Sun Co. is bailing No. 1 Brown at 4,100 feet with 4½-inch strainer set. It is on the east side of Cow Bayou, and is also an attempt to extend production southeast from the present limits. The Thrift Oil Co. will probably abandon No. 3 McGuire on the east side of the bayou, at 2,750 feet after vainly trying to make a well. The Brownie Babbittee Oil Co. junked No. 4 McLean following several blow outs that ruined the hole. On the banks of the bayou, the Amerada Petroleum Co.'s No. 1 State Land is now flowing 450 bbls. by heads at 3,400 feet, with offset locations made by the Gulf and Sun Companies.

On the north side of the pool, the Humble Oil & Refining Co.'s No. 16 Chesson is making 200 bbls. by heads, and to the south its No. 6 Winifree is bailing at 3,910 feet, after showing salt water at a higher level. The Humble Co. is bailing No. 1 Tasco at 3,250 feet. The Orange Petroleum Co.'s No. 7 Winifree is making 300 bbls. at 3,820 feet. The Hamilton Oil Co. is working over and deepening wells on its Chesson lease, some of them being around 4,000 feet deep. The Edgerly Petroleum Co.'s No. 9 Carbello is drilling at 3,345 feet. The Orange Petroleum Co. has a derrick up for No. 9 Winifree. The Humble Oil & Refining Co.'s No. 2 Tasco is at 4,165 feet, with No. 8 Chesson at about the same depth. The Sinclair Oil & Gas Co. is sidetracking No. 1 Parker at 3,450 feet. It is on state land on the banks of the bayou. C. L. Barrett is starting No. 1 Winifree to the northeast of production and across the bayou. The pool is in a marsh and waste oil accumulates on the stagnant waters. The various leases are being cleared by orders of the Oil and Gas Division of the State Railroad Commission in order to eliminate danger from fires.

### Other Pools

In the Humble Pool, The Texas Co. has a 250-bbl. well in No. 27 Carroll Oil & Gas Co. lease at 3,275 feet. The same company's No. 226 Landslide has been revived into a pumper at 2,510 feet. In the Sour Lake Pool, The Texas Co.'s No. 268 Fee was worked over into a pumper at 1,900 feet, and Barclay and others are bailing No. 3 Carpenter at 900 feet. In the Spindletop Pool, the Jack Oil Co.'s No. 3 Beatty is a salt water well and abandoned. The depth is 735 feet. Tyson and Wherry are bailing No. 3 Trembly at 750 feet, and the Amerada Petroleum Co.'s No. 1 McFaddin, the deep test drilling on the southeast side of the hill, is below 3,250 feet and fishing. The Texas Co. is deepening No. 9 Robinson on the northwest side of Blue Ridge Dome, and both the Gulf Co. and Esperson are drilling on the south side, Esperson being below 4,150 feet.

### South Louisiana

The south Louisiana pools are showing no more activity than are those in south Texas and no resumption is anticipated for the present. In the Vinton Pool, the Gulf Refining Co. worked over No. 26 G. N. G. into a 15-bbl. well at 2,500 feet and got salt water in No. 1 Gray at 3,400 feet. The Texas Co.'s No. 9 Gray is good for 75 bbls. at 2,310 feet. The Vinton Petroleum Co.'s No. 34 Gray is making 125 bbls. at 2,225 feet. Wilson and Tucker's No. 6 Parks bailed dry at 2,375 feet and is being drilled deeper. The Tanner Oil Co. is bailing No. 1 Vincent at 4,025 feet. The Vinton Petroleum Co. is deepening No. 12 Harmony with a derrick standing for No. 35 Gray. The Gulf Refining Co. is drilling No. 26 Star at 2,415 feet, and the Just One Oil Co.'s No. 1 Rogers at 3,545 feet. Ratcliff and others' No. 3 Gray is below 2,235 feet, and the Edgerly Petroleum Co.'s No. 1 Lasso is drilling at 1,765 feet.

In the Edgerly Pool, the Gulf Refining Co.'s No. 38 Bright-Penn is fishing. The Coastal Oil Co.'s No. 1 Hunter is drilling at 876 feet. In the Jennings Pool, The Texas Co. is testing No. 102 Latreilile at 1,590 feet. The Houissiere Oil Co.'s No. 1 Latheille is drilling at 765 feet, and the Coastal Fuel and Simms' No. 38 Fee is idle at 2,700 feet. The Gulf Refining Co. got salt water in No. 1 Durant in St. Martinsville Parish at 3,600 feet.

### Southwest Texas

The three gas wells of the Caroline-Texas Co. in Webb County are now shut in and the Border Gas Co., of Laredo is taking gas from No. 2, which gauged at 65,000,000 cubic feet per day. The Border Gas Co. is a subsidiary of The Texas Co., supplying Laredo and environs with a line to Nuevo Laredo, Mexico, where the gas is distributed by a local company. The Aviator Oil Co.'s No. 2 Puigg Brothers' ranch is rated at 150 bbls. at 1,750 feet, after showing gas and salt water at 1,600 feet. The Mirando

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Production Co.'s No. 1 is estimated good for 100 bbls. at 1,750 feet. The Cin-Tex Oil Co. is bailing No. 1 there at 1,800 feet, having been deepened from 1,600 feet. The Burton & Gunn Co. has started drilling No. 1 in what is known as the Aviator district, and Pinkerton and others are rigging No. 1. Butler and others' have a derrick for No. 1. The Aviators Oil Co. is rigging No. 3. The sand in the Aviator district is found from 250 to 300 feet lower than in the Schott or Mirando City district. G. A. Alonzo has a derrick for No. 1. Olsan and others' No. 3 is a location.

In the Schott district, the Kan-Oka Oil Co. is putting No. 2 on the beam and drilling No. 3 at 700 feet. Carnahan and others' No. 4 is drilling at 600 feet, and the Mercedes Drilling Co. has started No. 1. The Laredo-Big Bear Oil & Gas Co.'s No. 1 is below 1,800 feet, having cased off the gas at 1,600 feet. In the Mirando district in Zapata County, the Leaseholders Oil & Refining Co.'s No. 1 is rated at 100 bbls., the product showing 38 gravity, which is higher than the average. The Condren-Killam interests have started No. 5 and Hale and Tampfield have a derrick for No. 6 Porcion, which will be a deep test. The South Plains Oil & Gas Co. is bailing No. 1. The Mexican Oil Co. has a derrick for No. 1 in the Mirando Field.

Outside of the proven districts, the Cole Oil Co.'s No. 2 is idle, due to the boiler exploding. It is one mile north of Bruni. The Mop-Up Oil Co. has spudded in No. 1, south of the Schott district and Russel and Johnson have a location for No. 1 Sprague. The Worsmer interests are drilling a test three miles southeast of Laredo, and the Moon Oil Co. is drilling a mile southeast from that again. Both are below 2,000 feet. The Porcion Oil Co.'s No. 1 Farias is drilling at 1,100 feet on a location 7 miles northeast from Laredo.

The Tex-Pata Pipe Line Co., which has a 14-mile line from Mirando City to a loading rack on the Tex-Mex Railroad, reports having loaded out 81,000 bbls. during the month of August, an increase of 15,000 bbls. over the July runs. The crude sold for an average of 65 cents per bbl. most of it going to the refineries at San Antonio. Mills Bennett, of the Swiftsure Petroleum Co., of Houston, with a topping plant and bunkering facilities at Texas City, has offered to take 4,000 bbls. per day, but the price is unknown. The Swiftsure Co. also has storage tanks at Aransas Pass, near Corpus Christi, which is the nearest Gulf port to the Fields of Webb-Zapata Counties. It is said one of the large Coastal refineries has also offered to buy a stated amount every day to be made up into lubricating stocks. The company is now making most of its lube stocks from Desdemona and other north central Texas crudes, but proposes to enter into competition with those plants running coastal heavy crudes into lubricating oils.

The Texas-Mexican Oil Refining Co. is building a refinery at Laredo with a capacity of 1,000 bbls. per day and expects to be ready to run about October 1. On the Mexican side of the Rio Grande American operators have one rotary outfit and one cable-tool rig on locations, 40 miles south of Nuevo Laredo. Other locations have been made opposite Starr County, Texas.

### Somerset Field

In the Somerset Field, 21 miles southwest from San Antonio, in Bexar and Atacosa Counties, the Arkno Oil Co. and Duffey and others have the usual small pumpers in No. 10 Ramie and No. 3 Gonzales. There is much talk of a deep test to be drilled in the southwest extension since the development of the Kosse well in the Edwards lime, which is said to extend across the southwest of the Somerset Field. About four years ago the F. P. Thompson interests drilled a hole to below 2,880 feet and it was reported in the Edwards lime and barren. Since that time no deep tests have been drilled in the field.

The Grayburg Oil Co. is doing most of the work in the field, with 16 of the total of 29 rigs running there. It has completed No. 5-B Hartung, No. 5 Tex-Carruthers, No. 11 Shaw, Nos. 12 and 13 Schmidt, No. 8 Illa-Carruthers, and No. 16 G. W. Carruthers, all average pumpers, which means from 8 to 10 bbls. a day. The Gulf Production Co. is drilling in Nos. 2 and 3 Fee, and the Empire Gas & Fuel Co. has cemented No. 3 Fee.

### Outside of the Pools

The Sun Co. is bailing No. 4 Cade at High Island, in Galveston County, at 2,200 feet and it looks good for a well. The location is on the northwest side of the well known saline dome on the peninsula that extends west from Galveston Bay and is directly south of Jefferson County. W. D. Gordon and associates, of Beaumont, are rigging for a test there. Three months ago the Patton Oil Co., of Beaumont, got a 10-bbl. well there at 155 feet, but succeeding tests were failures. The Sun Co. has been doing considerable work there for several years and has made a few deep tests, one to below 3,400 feet. None was a producer.

Dr. P. S. Griffith abandoned No. 1 Moore, northwest of Richmond, in Fort Bend County, at 2,880 feet. The hole was junked. The United North and South Oil Co. abandoned No. 3 Cartwright, in Caldwell County, at 3,000 feet and moved the rig to another location for No. 4. The Victoria Oil Development Co. abandoned No. 1, near Bloomington, Victoria County, at 4,350 feet.

The Humble Oil & Refining Co. is washing No. 2 Singer, in Duval County, with strainer set at 3,035 feet. It is an important test and some of the executives of the company are now at the well. The location is on the southwest side of the Palangua Dome, a saline formation, where a good deal of exploration work has been done during the past 15 years by various companies and individuals. The shallow Piedras Pintas Pool is near by, where small wells are made at from 185 to 260 feet. It is a heavy gravity crude.

The Gulf Production Co. and McSweeney & Snowden's No. 4, located 7 miles south of Richmond, in Fort Bend County, is drilling at 3,075 feet. These interests have one well on the dome which is producing in a sand at 651 feet, while Nos. 2 and 3 went into gyp or salt at 750 feet. The present test is more than a mile west and north and its depth compared with the others indicates the pool, if one is developed, will be a deep-sand proposition. They have made a location for No. 5 Wheat ranch, located about 1,000 feet southwest from the original small well. The Neilan Oil & Refining Co. is drilling No. 1 Gobel at 2,300 feet, with a heavy gas showing, and its No. 1 Pilant Lake is below 1,876 feet. The Oil Production Co.'s No. 1 Ahlers is at 975 feet, with nothing yet. It is located near the discovery well. Brooks and others' No. 1 Ahlers is idle. The Big Creek Oil Co.'s No. 1 Moore-Hager, on the north side of Big Creek, is reaming at 1,165 feet. Herzog and others have started No. 1 Fee. The Iona Oil Co.'s No. 1 Moore is idle at 2,875 feet, with a derrick for No. 1 Hellmuth.

On the north side of the dome, at Stratton Ridge, in Brazoria County, the Freeport Sulphur Co. is drilling No. 10 Dannebaum at 2,235 feet and working over No. 9 on the same lease, its producer that sanded. The depth is 4,370 feet. It is rigging No. 2 Seaburn, on the east side of the dome. The Empire Gas & Fuel Co. is drilling No. 1 Wilson, on the north side, at 2,235 feet, and the Fairchild Petroleum Co.'s No. 1 Boggs at 3,835 feet. The Holmes Oil Co. is rigged for No. 1 McDonald, on the south side. The Mustang Mound Oil Co.'s No. 2 Allison is at 3,200 feet. The Reid Development Co.'s No. 1 Jamison is at 3,200 feet and the Transcontinental Oil Co.'s No. 5 old Ocean is below 3,250 feet. Faust and associates' No. 3, northeast from West Columbia, is 2,700 feet, having been shut down part of the week for fuel oil and casing.

In Montgomery County, the Hoosier-Bell Oil Co. is rigging No. 1 W. Renn, near Magnolia. The Compress Oil Co. has a location for No. 1 Solwenski, north of Lockhart. The United North & South Oil Co. is rigging at Prairie Lea. The Palmetto Oil Co. is drilling No. 2 Lacy, in Nacogdoches County, at 1,450 feet. The Matagorda Oil Co. has resumed drilling No. 1 Hasdorf, near Cuero, at 2,100 feet. Bronson Brothers have resumed work on the test near San Marcos, with the Magnolia Petroleum Co. taking a part of their acreage, furnishing the casing.

The Brazos Oil Co. will start a test 2½ miles northeast of the Orange Pool, where the Sandy Creek recently abandoned a test. The Stark Petroleum Co. is shut down, 18 miles northeast of Orange. In Burleson County, the Swastica Petroleum Co. abandoned No. 1 Rogers at 2,850 feet, and the Summerville Drilling Co.'s No. 1 Brantley at 2,100 feet.

### Milam County

The Tidal Oil Co. has a 20-bbl. well in the shallow-sand Minerva Field, in Milam County, at 750 feet, and Henry and others' No. 3 McClelland is making 15 bbls. at the same depth. Johnson and others' No. 3 Bauer is a duster. Guiberson and others' No. 2, near Cameron, is drilling at 980 feet. The Vanderbilt Oil Co.'s No. 3 Koop, in Jackson County, is below 3,000 feet. In Liberty County, the Fairchild Petroleum Co.'s No. 1 Peeler is drilling at 2,800 feet south of Nome. The Humble Oil & Refining Co. has a fishing job in No. 4-A Pruitt at 2,275 feet, and is drilling No. 5-A Pruitt at 1,235 feet.

# West Kentucky—Tennessee

*By VERN T. WHITNEY*

United Petroleum Syndicate's No. 5 Sam Martin, in Warren County, Kentucky, came in good for 100 bbls. daily at a depth of 1,231 feet while No. 6 on this property also was finished during the week, it producing 50 bbls. daily. Two completions in No Name Pool were good for 154 and 50 bbls., respectively, at 160 feet. Another completion in this pool was a 20-bbl. well of 50 degree oil.

BOWLING GREEN, Ky., Sept. 4.

The demand for production properties, both large and small, is very noticeable in the field at this time. Quite a number of small properties are changing hands, and occasionally one of the larger properties is picked up by some strong outfit. One of the largest deals of the past few weeks was the purchase of the Harrison Shannon 40-acre lease, from the Illinois Producers Co., by George Collins, of Pennsylvania. This Shannon property, which lies southwest of Bowling Green in the Rockfield district, has been one of the best known properties yet developed in Warren County. No. 1, which was completed last October, flowed at the rate of around 1,500 bbls. daily from the shallow sand, with the tools in the hole. This well actually flowed 60 days. There have been 10 wells completed on the property, 7 being shallow wells which range in depth from 480 to 505 feet, and 3 deep wells which average around 965 feet in depth. W. H. Martin, of Joplin, Mo., has had charge of all development work on the property, which has made in excess of 60,000 bbls. of crude. The sale price of this lease was reported to be $30,000 on a 50-bbl. guarantee. On a five-day test, this property made 60 bbls. daily and since it has been taken over by Collins, is pumping 70 bbls. daily, due to the reason that he is pumping the wells a little longer daily.

Another deal reported is the taking over by the Atlantic Oil Producing Co. of the Jenkins 50-acre lease, in the Western Davenport Pool, adjoining their Brownfield lease on the south and also adjoining the Garrison lease of the Tex-Ken Oil Co., on which a good deep well was completed a short time ago. The Atlantic has started its No. 1 on the Jenkins as an offset to the No. 1 Garrison well.

Warren County for the week in review shows 11 producing wells, 10 of which were completed in the deep sand. There was 1 dry hole in the deep sand, it being the No. 2 on the Lowe farm, at the extreme northeast of the northeast extension area of the Waller-Runner Pool at 1,270 feet, and 4 dry holes in the shallow formation. There was one abandonment, No. 4, on the J. H. Martin lease being developed by the Atlantic Oil Producing Co.

The best completion of the week in Warren County was the No. 5 on the Sam Martin farm, being developed by the United Petroleum Syndicate and lying northwest of Bowling Green in the Levi Simmons district. This well was drilled to a total depth of 1,231 feet, 95 feet below the shale, with 17 feet of pay, and is estimated at 100 bbls. No. 6 on this property was also completed during the week, estimated as a 50-bbl. well at 1,173 feet. This company has two wells on the sand ready for completion the first of this week, one on the Higginbotham lease, adjoining the Martin on the south, and the other on the C. Westbrook farm, adjoining the Martin on the west. It is also drilling No. 1 on the E. Hutton farm, adjoining the Martin on the southwest in which a good show of oil was found in the shallow pay at around 700 feet, and is spudding No. 1 on the Morgan lease, which adjoins the Higginbotham on the south.

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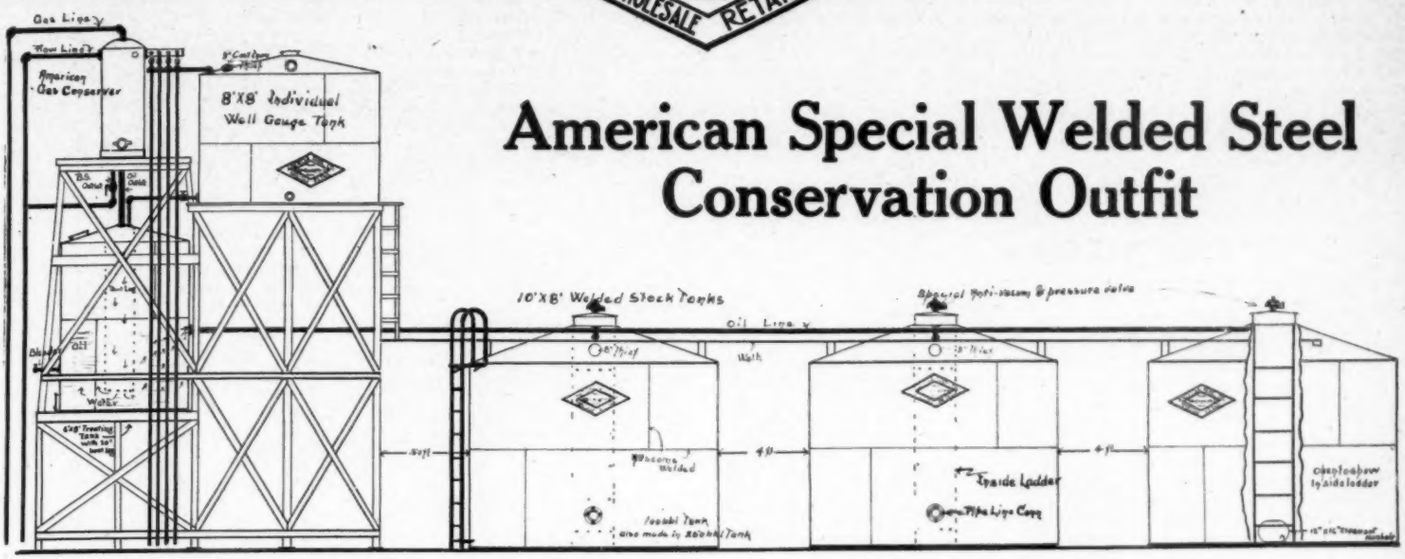


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In the Glen Lily extension of the Davenport Pool, the Big Jack Oil Co. completed its No. 34 on the R. L. Morris, good for 10 bbls., at 1,149 feet. On the adjoining H. Ferguson lease, the Uncle Jeff Oil Co. completed its No. 10, good for 10 bbls., at 1,014 feet. On the Hobson Heirs' lease, Nos. 7 and 8 were completed by the Crump Oil Co., good for 5 bbls. each at 944 and 967 feet, respectively. On another portion of this Hobson property, the Scherzinger Syndicate brought in its No. 1 well, good for a 2-bbl. pumper at 942 feet. On the north side of the Barren River, the McClintock Oil Co. got a 10-bbl. pumper in its No. 15 on the Willie Miller property at 960 feet.

In the Rockfield shallow district, the Atlantic Oil Producing Co. completed its No. 5 Potter at 400 feet, good for 40 bbls. This well made several flows during the day and is considered one of the best on the property. In this same district, the Y. F. W. Syndicate of Florida got dusters in its No. 1 Bogle and its No. 3 Truitt, in the 500-foot sand. On the Bryant lease, Roy Hogan got a dry hole in his No. 1 at 485 feet, as did unknown parties on the Downey lease.

In eastern Warren County, the Powell Oil Co., of New York, which recently purchased the Bronson and Hewitt leases, completed its Nos. 10 and 11 Bronson, good for 10 bbls. each at 500 and 505 feet, both being approximately 90 feet below the shale. Locations have been made for Nos. 12 and 13.

**Allen County Development**

Allen County continues to bring in good wells with great regularity, the past week showing 15 producers and 2 dusters. Quite a line contest existed at the junction of the Lewis-Carpenter-Dent, Brown and Mitchell leases, in the No Name Pool, southwest of Scottsville. Four wells were being completed in a circle less than 100 feet in diameter. The first to be finished was the No. 13 Lewis, offsetting No. 6 Carpenter-Dent. Although the Lewis well was the first to be completed, in bailing, the oil caught fire from the forge on the Carpenter-Dent lease and did considerable damage, enabling the Lowman Brothers, on the Carpenter-Dent, to complete their No. 6 well and get on the pump several hours in advance of the Lewis. The Carpenter-Dent, during the first 24 hours, pumped 154 bbls. at 160 feet, 70 feet below the shale, with 15 feet of pay. The No. 13 Lewis, which was injured by the fire, is estimated to be a 50-bbl. pumper at 160 feet. On the Barbee lease in the same pool and west of the prolific Mitchell lease, Danner and others completed a 50-bbl. producer in their No. 8 well at 185 feet. In this same immediate district, Sandusky & Johnson got a duster in their No. 11 on the Dyson farm at 250 feet, 85 feet below the shale. On the J. W. Kelley lease, the Bradford Oil Co. got a 2-bbl. well in its No. 2 at 280 feet. On the Bud Garrison farm, Chapman & Bowman completed their second good well at 231 feet, making 25 bbls. natural. It is contemplated to drill at once 20 more wells on this property, which lies about 1 miles south of the Mitchell lease.

The outstanding completion in the No Name Pool for the week was a 20-bbl. well on the Dennis lease, by Keyes and associates, offsetting the Mitchell property on the north at a total depth of 320 feet. The south portion of this lease has three small producers and the No. 4 well was drilled on the north end of the farm. The oil in this well tests around 50 degrees Baume, and it is stated that the Massey Refining Co., which operates a refinery just outside the city limits of Scottsville, has offered to pay Somerset light price ($1.90) with an additional premium of 50 cents per bbl. for this oil.

In the Gainesville Pool, Byrne and others completed their No. 3 on the Calvert 55 acres, good for 25 bbls., at 386 feet, 100 feet below the shale, with 30 feet of pay. This well showed natural for a 2-bbl. pumper, but after being shot with 500 sticks of dynamite, showed the above results.

In the Lucky Jim Pool, Charles Dice completed No. 1 on the Stark lease after a 20-quart shot, good for a 10-bbl. pumper at 355 feet. In the Brown Pool, 3 miles north of Scottsville, J. R. English, Trustee, completed No. 1 on the W. Motley farm at 403 feet, 68 feet below the shale, which made 100 bbls. natural. In the Miller Pool, west of Scottsville, Clark & McGlone completed No. 1 on the Smith farm, which made 50 bbls. natural at 216 feet, being immediately below the shale. In the Sledge Pool, Gordon D. Whiteside completed his No. 1 well on the McDonald lease for a 5-bbl. pumper at 464 feet, 49 feet below the shale.

In the Keen Pool to the southwest of Scottsville, H. A. Kiser, Trustee, got a 25-bbl. well after shooting his No. 7 L. J. Hinton at 314 feet. In the old Petroleum district, the Kentucky Oil Co. completed its No. 7 Tucker for a 5-bbl. pumper at 340 feet, while the Petroleum Producing Co. got a 5-bbl. well on the Ogles lease at 376 feet, and a 7-bbl. pumper on the Wolfe tract, at 384 feet. On the Nelson farm, the Gray Syndicate got a dry hole in its No. 1 well at 460 feet. In the Satterfield Pool to the west of Scottsville, the Kenlatex Oil Co. has contracted for five additional tests to be drilled at once on the Smith-Oliver lease. No. 16 on this property is nearing completion.

**Activity in Butler County**

Interest in new work being done in western Kentucky is centered in the new wells starting in Butler County near the town of Rochester. S. A. Painter and associates, of Pittsburgh, are starting a most important test a short distance from the producing well on the Coleman Barton farm, drilled in over a year ago by the White Oak Fuel Co., also of Pittsburgh. The new location made by Painter is on the Hammers farm about one-eighth of a mile west of the discovery well on the Barton farm, which is still pumping at the rate of five bbls. daily from a "true sand" at a depth of 960 feet. Northeast of the Barton well, just over the Butler County line in Ohio County, Ion Carroll and others are arranging to start a well on a block of 1,000 acres. This will be an important test as it is located in a section of Ohio County that has never had a test, near Horse Branch in the northeastern part of Ohio County near the Grayson County line.

The Plantation Consolidated Oil Corporation is drilling two wildcat wells north of the old Hartford Pool in Ohio County. Fred Hillis, the discoverer of the famous Jake Moulder Pool in Warren County, near Jewell Bend, is starting a wildcat venture on a block of undeveloped acreage in Ohio County.

# Wyoming Field Operations

*By F. B. TAYLOR*

Montana-Wyoming production increases 3,115 bbls. a day. Inland Oil & Refining Co. gets 800-bbl well in Cat Creek. Mammoth Oil Co. drilling several wells on Teapot and has rigs up for 21 tests. Fields reviewed and wildcat tests accounted for. Cat Creek Field has close to 100 wells. Late news from Sunburst Field.

CASPER, Wyo., Sept. 2.

Field work in the Big Horn Basin is slowing down somewhat, due probably to the present market conditions. Grass Creek and Elk Basin are fairly active, but the small operations and the wildcats are rather quiet compared to last spring.

The Utah Oil Refining Co. is drilling at about 2,000 feet and has set 12-inch pipe through the Sundance sand. This well is now in the Embar and will be drilled to the Tensleep, which will probably be found at about 3,600 feet. This location is on what is called the Black Mountain Dome, Section 36-43-91, and about 15 miles east of Thermopolis in the foothills of the Big Horn Mountains. If production is found, it will likely turn out to be black crude, for the hole is now below the horizons that produce the light oils in this region.

This part of the Big Horn Basin is attracting considerable attention because of different interests becoming active there. It is the southeastern corner of the basin where the Big Horn range swings around and strikes due west, forming a giant corner in one of the highest mountain ranges of the country. After the corner is rounded, the range continues as the Copper Mountains and then after crossing the Big Horn Canyon where the Wind River cuts through, the same range of mountains is called the Owl Creek range.

In this corner is located the Red Rose Dome, where some black oil has been found but which is not producing now; the Warm Springs Field that produces from about 900 feet and sends the crude through a pipe line to the refinery at Thermopolis, a distance of about 15 miles; the Hale Dome, where the Union Oil Co. of California has a rig up and expects to start drilling in the near future; the Kirby Creek operations, where the Ohio Oil Co. has some black oil production, and the Murphy Dome. Close to Thermopolis is the Lucerne Dome.

On the west side of the river are several structures, some of which have been drilled and others not. The Hamilton Dome is productive but the Sand Draw Dome has never been drilled, though it is a good looking structure that promises well. It is quite small in area. On the Hamilton Dome the Pheobus Oil Co. is putting in a string of heavy tools and has a rig up for a test, NW NW, Section 14-44-98, and it looks like a good location. The Hamilton Dome produces a very good grade of black oil. This is about the only active well at present in that neighborhood, although the Golden Eagle Dome is drilling one well to the south and east.

Across the Owl Creek Mountains in the Wind River district, the field work is rather quiet. The Pilot Butte Field is producing about 150 bbls. per day to be sent through the Illinois Pipe Line Co.'s line to Riverton, whence it is shipped by rail to Casper for refining, but this is about the only oil that is coming out of that territory. The Connolly Oil Co. is shut down northeast of Riverton, in a wildcat venture, and about the only active wildcat is that of the Superior Syndicate, drilling on the Sheldon structure. This wildcat is attracting considerable attention, due to the distance it is located from any proven area.

In the Red Desert country in Fremont County, the Anna Belle Oil Co. is setting the 8¼-inch casing in blue shale and cementing. This well is a wildcat located near what is known as Pickett Lake and is far from any known production.

In the Lost Soldier district, including the Mahoney Dome and Ferris Field, the Bair wells of the Kasoming Oil Co. at the northwest corner of the field are making a large production at present. This field is shipping around 4,800 bbls. for the daily runs and the Ferris Field is making about 700 bbls. for the same period. The Ferris Field makes a much higher grade production than the wells at the Bair camp, but the Bair oil makes up in quantity. On the Mahoney Dome, the Producers & Refiners Corporation's No. 1, Section 34-26-88, is standing cemented and will be ready to drill in the coming week, and No. 1, on the adjoining Section 33-26-88, is drilling at 1,320 feet, and the same firm's No. 2, Section 4-25-88, is down 2,175 feet and drilling in blue shale.

On the Wertz Dome, the Producers & Refiners Corporation's No. 2, Section 7-26-89, is drilling at 3,395 feet, and the same firm's No. 3 is down 1,010 feet. In the Ferris Field, the Producers & Refiners Corporation's No. 5 is cleaning out the 8-inch casing at 1,825 feet, and No. 3, Section 25-27-87, is drilling at 1675 feet; No. 8, Section 25-26-87, is drilling at 1,650 feet, and 10 on the same section, is drilling at 1,708 feet, with No. 13 rigging up. At O'Brien Springs Dome, south of the Lost Soldier, the Ohio Oil Co. has two wells drilling; No. 1, Section 2-24-87, is down 3,850 feet and trying to sidetrack some 4-inch casing, and the No. 1, Section 5-24-86, is drilling at 3,200 feet.

On the Union Pacific Railroad at the new operation of the Rock Springs Field, in Sweetwater County, the Ohio Oil Co. is drilling again after mudding off the gas flow, which was found at 2,511 feet last week. This location is on Section 16-16-104. On Section 13-17-104, the Producers & Refiners Corporation has rig building and will start drilling in the near future. This location is about 5 miles north of the Ohio's well. On Section 11-17-104, the Midwest has a fishing job, and the Associated Oil Co. and the Montacal Oil Co. joint well, Section 16-17-104, is down 1,725 feet. The Associated Oil Co. and Murphy interests' well, Section 26-17-104, is drilling at 280 feet.

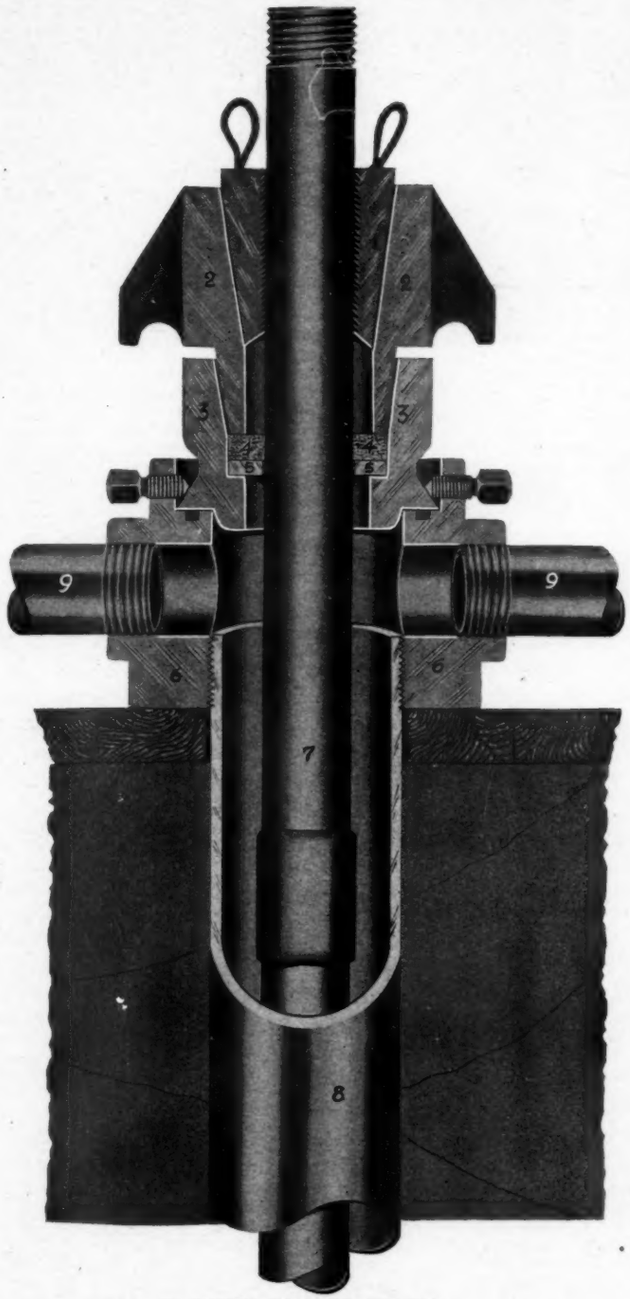
**Salt Creek and Teapot**

On the north end of the Salt Creek Field, where the New York Oil Co. has been drilling for over a year, Section 7-40-78, the well reached the second Wall Creek sand and found water. It will be abandoned.

On Section 5-39-78, the Consolidated Royalty Oil Co. has a shale well at 1,640 feet and is testing for production. The company is waiting for cement to set in No. 4 Richardson at 2,153 feet.

On Section 8-39-78, the Wolverine Oil Co. has completed a cementing job in its No. 1, and will be shut down for two weeks until the cement hardens. The Fensland Oil Co.'s No. 2 Bywater, Sec-

# Mildren Tubing Support

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It is impossible at times to obtain pup or short length joints on which to hang a string of re-enforced upset tubing the desired distance from the bottom of the hole. When the proper length joints are not available, a nipple is necessary on which a thread is cut with ordinary stock and dies, thus eliminating the important re-enforced upset tubing joint that hangs in the casing-head from which the entire string of tubing is suspended and which receives the constant vibration caused by the polish rod.

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tion 20-39-78, is in the second Wall Creek sand, and will make a good well. The same company has four other wells that will be ready to complete within the next few weeks.

The Inland Oil & Refining Co., Section 30-40-78, in its No. 6 Black has a well good for 600 bbls., though only 8 feet in the sand. This hole is 2,280 feet deep. No. 5 Black is cemented and standing at 2,324 feet, and No. 2 Shoup is drilling up a casing shoe at 2,470 feet, Section 29-40-78.

On the Teapot Dome, the Mammoth Oil Co.'s first test in Section 21-39-78 is drilling at 1,750 feet; No. 1, Section 29-39-78, drilling at 2,460 feet; No. 1, Section 20-39-78, drilling at 1,237 feet; No. 1, Section 28-39-78, drilling at 540 feet, and No. 1, Section 27-39-78, spudding.

The Weaver Contracting Co. has completed the last of the 21 Mammoth Oil Co. rigs of the first contract and the firm will shortly start in on the second lot of rigs that are to be for the second 20 wells to be drilled.

The Teapot Dome Syndicate, composed of W. J. Lindsay, J. W. Bingenheimer, M. J. Foley, M. J. Burke and J. J. Chapman, all Casper men, have completed a rig, SW cor. Section 2-38-78, and the tools are going into the rig now for the first well outside the Mammoth holdings on the Teapot Dome. The location appears a good one for an outside well.

**Field Reports**

The Kinney Coastal Oil Co. drilled in a good producer in southern Salt Creek on Section 19-39-78, and this makes the second large well on the property of that firm. The new well is reported at 1,500 barrels and its location is north of the Mosher wells on the same section. The Kinney Coastal Oil Co. bought this tract at the land sale at Douglas over a year ago, and it was known at the sale as Tract N.

The new wildcat operation in eastern Fremont County, known as the Sheldon Dome is quite active. A water line about 2 miles long has been completed and the rig and camp are nearing the finishing point. About 75 truck loads of material have gone into the location. George Ferguson, the well known field manager of the Glenrock Oil Co., who is looking after the drilling of the first Sheldon well, expects to have it spudding by September 10. This location in on the Shoshoni Indian Reservation.

The Ashland Wyoming Oil Co., drilling south of the city of Greybull, has about 60 feet to go to reach the Greybull sand, and completion is expected within a few weeks. The hole is caving, due to the shut down of the past weeks, but the drillers hope to complete by the middle of next month.

A water tank at the Greybull refinery of the Standard Oil Co., of Indiana, had a collection of gasoline vapor between the top of the water and the roof, which exploded and caused some consternation due to the proximity of other tanks containing volatile oils. The refinery fire department and the Greybull fire department, however, managed to get the flames under control before any further damage resulted.

Considerable excitement was stirred up in Denver and other points the past few days through a report in some newspaper that the Fensland Oil Co. was drilling a well in on the Teapot Dome. The Journal office at Casper received several telegrams asking for details.

No company is drilling any wells on that area commonly termed the Teapot Naval Reserve, except the Mammoth Oil Co., the subsidiary of the Sinclair interests. The Fensland and several other firms are drilling wells in what is known as the south end of the Salt Creek Field. The Mutual Oil Co.'s well was also drilling on the Teapot Naval Reserve up to a few weeks ago, but was shut down by armed forces from Washington.

However, the Teapot structure extends into that area that the oil men here refer to as the south end of Salt Creek and there are some wells located upon the Teapot Dome, which are really outside the Naval Reserve area. This has been true since the Marine Oil Co.'s No. 1 came in a gusher on Section 17-39-78, and this well was the first to be drilled south of the fault plane that separates the Teapot and Salt Creek. The Marine well was drilled in September, 1921.

**Refineries Enlarging**

The Mutual Oil Co.'s refinery, at Glenrock, Wyoming, is adding by purchase of about 40 acres to its site and will start work at once on the building of two 55,000-barrel storage tanks. Also a car repair shop is to be added, which will include a painting shop.

The Mutual plant is now handling almost its capacity of crude, 10,000 barrels, and the plant of the Standard Oil Co., of Indiana, adjoining it, is rerunning all the waste oils through its cracking stills for gasoline extraction.

The Utah Oil & Refining Co., at Salt Lake City, a plant of 5,000 barrels capacity, will spend $600,000 on enlarging the refinery and the plans will include several high pressure stills working under the Burton patents for the cracking of heavy oils for their gasoline. The gasoline output will be increased about 10 per cent.

At the Casper refineries, grave charges of sabotage are bing made among the men of the night shifts, who state that the locomotive runners working with the switching of the oil trains in the local refining plant are handling the cars with terrific roughness, the alleged intentions being to try to disable the tank cars and cause as much trouble to the workers in the plants as possible.

The Western Pipe Line Co. has completed one 55,000-barrel tank at Casper and has started another, while the site for a third is about ready for the bottom plates.

The Central Pipe Line Co. has about 30 miles of its pipe line from Salt Creek to Casper in the ditch and ready for testing. Two machines are at work on this line and all the line is to be asphalted and then wrapped with tar paper to protect the pipe from alkali in the soil. The Central is laying all its line with hand labor, while the Western Pipe Co. has used the pipe laying machines to connect the joints. The Central Pipe Line Co. is controlled jointly by The Texas Co. and the E. T. Williams Oil Co.

The Texas Co.s refinery construction is being held up somewhat by the non-arrival of material, due to the railroad labor trouble, but the work is going ahead with considerable energy in spite of this, and the grading for the different plant equipment is about half complete.

**In the Montana Fields**

The Cat Creek Field, in Fergus County, Montana, now has 97 producing wells and will pass the 100 mark within the next two weeks, unless an accident delays the drilling in of some of the wells close to the sand. This field was discovered in 1920, and has steadily increased its size and production since that date. At first it was considered only a small field that did not cover more than a section or two, but from the present appearance it would seem that the edge of the field is by no means known yet, due to the finding of the second sand pay.

Brush Creek and Flatwillow, two wildcat operations near the Cat Creek Field are active and will soon be ready to report. Both lie in Fergus County.

The Weowna Refining Co., which operates a small refinery at Winnett, the rail point for the Cat Creek Field, has declared a dividend. This refinery is a small local plant, but appears to be making good.

**In the Sunburst Field**

The Ohio Oil Co. has made six locations for tests in the Sunburst Field in Toole County, Montana. The new locations are all in Section 34-36-2w, on the Davey, Swazey and Halloway tracts. The Illinois Pipe Line Co. will lay a pile line from the field to the town of Sunburst and a small topping plant will be built at Sunburst. The Sunburst Oil Co.'s test on the Boyce farm is reported to be producing less than 100 bbls. of oil and 900 bbls. of water. The production is given as low as 25 bbls. a day. There is a tremendous gas flow. The Gladys Belle Oil Co.'s well, Section 18-35-2w, had not yet been put on the pump. It is reported to be capable of bailing 200 bbls. a day. It is one of the best looking wells in the field. The California Oil Co.'s well on the Morton farm, Section 13-34-1w, is a commercial producer and it extends the Sunburst Field southward. It is 5 miles from the discovery well.

Sunburst will shortly have a municipal water supply and electric lights. Water is to be piped from a big well in Section 16-36-2e. It is excellent soft water.

# News of Mexican Oil Fields

*By GEORGE BLARDONE*

Mexican Eagle Oil Co.'s No 9 Cerro Veijo, which blew in a week ago, began to show oil before the well was shut in to erect storage. Penn Mex Fuel Co.'s No. 3 Molino, in South Fields, drilled into salt water at 2,900 feet. La Corona Petroleum Co.'s No. 6 Castillo de Teayo, an important wildcat, is having trouble with casing at 2,335 feet. Yellow fever quarantine regulations at Tampico.

TAMPICO, Mex., Sept 1.

Mexican Eagle Oil Co.'s No. 9 Cerro Veijo literally "blew in" last Saturday when the drill, at 1,897 feet, tapped an enormous volume of gas which threw the tools clear of the hole, wrecking the derrick. The gas volume equalled the flow of gas from International Petroleum Co.'s sensational No. 1 Toteco, when it came last year. This dry gas was followed by a show of oil early Sunday morning, and the well was then closed in to permit connections to be made to steel storage to test it for oil production. These connections will probably be completed within the next 48 hours. This well is 400 meters north from Mexican Eagle's prolific No. 2 Cerro Veijo; and it is 53 feet shallower than No. 2, having a sub-sea level depth of 1,707 feet. It will be recalled that No. 2 was opened for exploitation about the middle of last June, and has been producing 20,000 bbls., plus, ever since. South of this No. 9, spaced 400 meters apart, Mexican Eagle has made locations for Nos. 12, 14 and 15.

One other South Fields' completion the past few days was Penn-Mex Fuel Co.'s No. 3 Moline, which drilled into salt water at 2,900 feet.

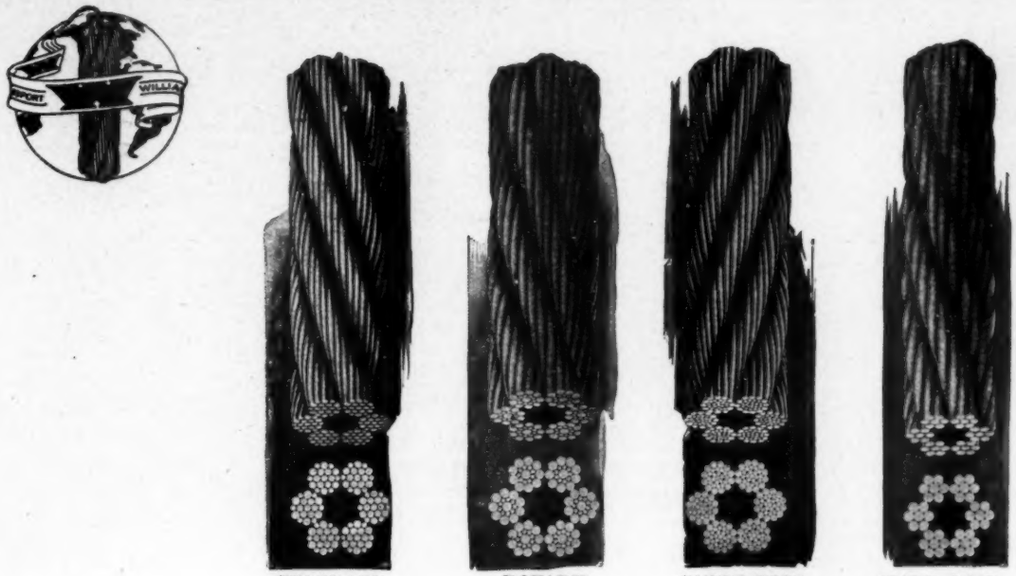
In the Panuco Pool, Transcontinental Petroleum Co.'s No. 2, Lot 4 Cacalilao, is another big gasser (estimated flow, 20,000,000 feet), which is making 200 or 300 bbls. of oil with the gas at 1,665 feet. It is thought that as the gas pressure diminishes the oil will follow in substantial volume. Transcontinental's No. 2, Lot 14 Tanchicuin, is a duster at 2,200 feet.

**Fields in General**

Mexican Eagle Oil Co. is going to try its fortunes with another test in its old Tierra Amarilla Field, which lies northeast of its Potrero-Alazan properties. It has made location there for No. 20, which will be drilled in due time. Mexican Eagle, prior to 1914, drilled no less than 16 wells in this Tierra Amarilla tract, getting some small producers at depths ranging from 2,200 feet to 2,400 feet, plus. The biggest well was 400 bbls. actual exploitation considered. Its No. 6 there, completed at 2,442 feet, was making 1,000 bbls. when the drill, at the depth noted, went into production rated at 40,000 bbls.; however, salt water appeared and the well was reduced to a very nominal stripper, say 100 bbls. Numbers 10 and 14 were both drilled into salt water at over 2,500 feet, the latter (2,580 feet), having a flow of 15,000 bbls. of hot salt water (temperature 170 degrees F.), before it was plugged.

Going farther east from Tierra Amarilla, Mexican Eagle is deepening its old No. 21 Tanhuijo, which was a 20-bbl. well at 3,200 feet. It has set a string of 4-inch there at 3,206 feet in the white limestone, which may or may not be Tamasopa, and the drill will be sent down a little deeper to see what happens. In this Tanhuijo, Mexican Eagle has drilled some 23 wells, the last three being completed in 1916, of which No. 21 was one. This field had a few small wells, the largest of which was possibly No. 1, long since abandoned, which made some 40,000 bbls. during its life. Some of this Tanhuijo oil was as light as 34 degrees B., indicating considerable filtration. Some of these wells were quite shallow; others were deep, the deepest hole being No. 12, which drilled into salt water at 3,500 feet. This was the only pool in all northern Vera Cruz which was ever pumped.

Mexican Eagle's active drilling tests are epitomized for the week as follows: No. 25 Los Naranjos, Lot 260 Amatlan, offsetting the prolific No. 1 in the same lot, is spudding in; its No. 21 Alazan is drilling in shale and shells at 2,459 feet; its No. 5 Cerro Veijo is drilling in a hard rock at 3,430 feet; its No. 5 Tlacolula is drilling in blue shale at 2,500 feet; Its No. 2 Palma Sola is underreaming to carry 8-inch down to 2,655 feet, in shale and shell; its No. 4 there is drilling in gray shale at 2,370 feet; its No. 5 is running 8-inch casing at 2,590 feet, and its No. 6 has set 15½-inch in blue shale at 440 feet.




# 7 Cautions to Users of Wire Lines

1. Do not throw coils of rope over side of reel, when spooling on drum or removing from drum. This throws twists into line, injures line and makes it hard to handle.

2. See that line "fleets" across the drum properly.

3. Keep grooves of drums and sheaves in perfect alignment.

4. Don't run line in hole so fast that when tools or bailer hit bottom line follows them in and kinks. Even an easy jerk against a kink often snaps a line.

5. Don't slip the line through the clamps. While this practice is quite widespread, it is very hard on a wire line and should be guarded against.

6. In pulling loose—on a fishing job or where tools, bailer, or casing are stuck—remember that the strain may readily exceed any line's breaking load. Too severe jerks or strains will crack up the steel.

7. When line is out of service for a few days, grease well to prevent rust.

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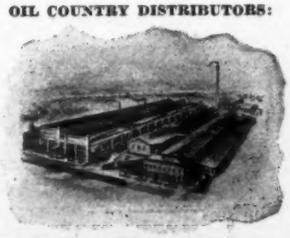

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DUNHAM & LAWLER, Los Angeles, Calif.

MONTANA LUMBER & HARDWARE CO., Lewistown and Winnett, Mont.

Huasteca Petroleum Co.'s (Mexican Petroleum), No. 5 Tierra Blanca is drilling in blue shale at 175 feet; its No. 5-A there is spudding, and its No. 9 is rigging. In Cerro Azul, Huasteca's No. 25 is drilling in brown shale at 1,295 feet, and its No. 27 is in a similar formation at 1,325 feet. In Chapopote Nunez, its No. 4 is drilling in gray shale with traces of pyrites of iron at 2,165 feet, carrying 8-inch; its No. 5 is drilling in gray shale at 1,665 feet, and No. 6 is spudding. In Tres Hermanos, its No. 1-A is drilling in gray shale at 1,165 feet; and over in Moralillo, its No. 1 is in blue shale at 420 feet. La Corona Petroleum Co.'s No. 6 Castillo de Teayo has had some bad luck with its 10-inch, cemented at 2,335 feet in gray shale, and it is running an 8-inch swedge there, trying to clear what is evidently collapsed casing in order to get 8-inch to the bottom to carry. This test is an important wildcat, and it will be watched with interest as the drill descends. Its No. 1 Percero, west of Aguada, is drilling in shale at 900 feet. Cortez Oil Corporation is resuming with standard tools in its No. 2 Aguada, where the rotary stopped at 3,877 feet in sandstone and shale; its No. 2 (diamond), is drilling in a similar formation at 2,002 feet. Cia. Pet. Indiana Mexicana (Snowden Brothers), has cemented 10-inch at 2,104 feet in its No. 21 Chiconcillo, in the San Felipe; and its No. 22 there, in a similar formation, has cemented same size pipe at 2,097 feet. International Petroleum Co. is rigged and waiting for permit for its No. 23 Toteco. Down in Aguada Nacida, its No. 3 is cementing 8-inch at 2,602 feet in shale. Over in San Sebastian, east of Chinampa, International's No. 1, Lot 3, is drilling in hard gray shale around 3,000 feet. Mexican Gulf Oil Co.'s No. 2 Chila, Cortaza, has one joint of 8-inch pipe in the hole at 2,364 feet, where the drilled stopped in a shale; its No. 29, Lot 190 Amatlan, is drilling in shale at 1,330 feet. Penn-Mex Fuel Co. had the misfortune to lose the rig over its No. 2 Palo Blanco, which is a likely looking test with the drill stopping at 1,585 feet in a shell. Inflammable gas from the hole caught fire and destroyed the derrick. Penn-Mex's No. 1 Jardin is drilling in blue shale at 2,685 feet; and its No. 1 La Pita is running 12½-inch at 690 feet.

### Panuco Operations

In the Panuco Pool, La Corona Petroleum Co.'s No. 34 Potrero del Ojital is underreaming in limestone at 2,057 feet, showing 50 bbls.; its No. 39 San Manuel is fishing an underreamer lug at 800 feet. East Coast Oil Co.'s No. 21 Los Potrerillos, is drilling in shale at 2,135 feet; its No. 22 Willis is drilling in limestone at 1,590 feet. La Espuela Oil Co.'s No. 2 Silva, Lot 21 Isleta, is drilling shale at 695 feet; and it is building a derrick for another test in its Perforadores tract in the heart of the old producing area. Panuco Boston Oil Co.'s No. 11 Ugarte is drilling in hard limestone at 1,255 feet. Cia.-Mex. de Pet. Placeres, No. 4, Lot 21 Salvasuchi, is drilling in blue shale, 1,275 feet. Thomey & Price, No. 4 Finca Hernandez, (E. M.), is cementing 8-inch in a hard shale at 1,574 feet. New England Fuel Oil Co. has gone back in its old prolific Piazza lease, and is drilling No. 7 there at 500 feet in shale. Mexican Gulf Oil Co.'s No. 4, Lot 21 Tanchicuin, is spudding in; and it is clearing location in the northwest corner of the lot for No. 5.

### Cacalilao Sector

In the Cacalilao Sector, International Petroleum Co. evidently has a dry hole in its No. 10, Lot 4, Fraction 1, which is drilling now at 2,360 feet in the Tamasopa limestone with nothing showing. This test is in the southwest corner of the fraction in question, just west of the Laguna del Tanchicuin. North of this location, in the same lot and fraction, International's No. 9 is drilling in the San Felipe at 2,012 feet. Up in Lot 5, the northernmost lot in Cacalilao, International is rigging for No. 11, and has a derrick up for No. 12. Mexican-Sinclair Petroleum Corporation's No. 1, Lot 2-A Cacalilao, is running in 12½-inch at 190 feet in shale; and it is rigging standard for No. 2, in the same lot. Transcontinental Petroleum Co.'s (S. O. of N. J.), No. 2, Lot 4, is drilling in limestone at 1,600 feet; its No. 3 is rigged, and No. 4 (all same lot), is rigging.

### Topila and Miscellaneous

In the Topila Pool, Mexican-Sinclair Petroleum Corporation's No. 1 Loma del Pozo, is drilling in shale at 2,673 feet, with the 8-inch showing a tendency to freeze, owing to caving shale. The Texas Co.'s No. 2, Lot 51 Paciencia de Aguacate is spudding.

In the Marland Field, Cia. Pet. Franco Espanola's (Marland interests), No. 5 Limon has cemented 8-inch at 1,520 feet in a gray shale with limestone shells; its No. 6 Limon is drilling in gray shale at 1,525 feet, and its No. 7, same, is drilling in a similar formation at 2,530 feet.

At El Barco, Mexican Gulf Oil Co.'s No. 1 is drilling in gray limestone at 2,129 feet, and its No. 2 is drilling in the same formation at 1,082 feet. Kern Mex Oil Fields, Ltd.'s No. 1 El Barco, is drilling in gray limestone banded with chert at 2,325 feet.

At Ebano, Mexican Petroleum Co.'s No. 13 Chijol is drilling in blue shale at 440 feet; its No. 14 is cementing 8-inch at 1,597 feet in limestone, and its No. 21 La Dicha is drilling in blue shale at 1,395 feet.

At Corcovado, Mulcahey and others' No. 1 Smith & Co., (Lot 4), is drilling in gray shale at 650 feet.

At Cocuite, southwest of the city of Vera Cruz, Island Oil & Transport Corporation is drilling in blue shale at 3,325 feet.

From the State of Chiapas word has been received that Mexican Seaboard Oil Co.'s subsidiary there has spudded in and is making hole in No. 1 La Ciuxada.

### Mexican Notes

Mexican Eagle Oil Co. has shut in its No. 2 San Geronimo, which has been producing as much as 11,000 bbls. for several months now, and opened its recently completed No. 6, which is about 100 meters west of No. 2. It is running 10,000 bbls. the day from No. 6, with the line pressure standing at 125 pounds. This heavy oil (13.2 B.) is being mixed with the lighter gravity south fields crude for pumping purposes to Tampico. The Mexican Eagle has also reopened its old No. 4 Alazan, which starts off again stripping as much as 3,000 bbls. Island Oil & Transport Corporation's No. 4, Lot 176 Amatlan, which came in with a big head of oil, is stripping around 1,000 bbls. now.

D. W. B. Mackay, formerly assistant general manager of the Island Oil & Transport Corporation, is rigging to drill a test in extensive acreage he has secured just west of Rodriguez station, on the Monterrey-Laredo division of the National Lines. The location for Chancaca No. 1 is 5 miles northwest of Rodreguez and some 40 miles south of Laredo. Competent geologists were engaged to go over the properties and their report is quite favorable.

# News from Fields of Canada

*BY VICTOR LAURISTON*

Peace River Drilling Co.'s test 30 miles north of Peace River, in northern Alberta, has finished dry at 905 feet. Considerable activity in Sweetgrass district of southern Alberta. Sunburst-Boyce's No 1, 9 miles south of international boundary, in Montana, reported as making 10,000,000 cubic feet of gas. Sweetgrass Arch is described in detail.

CHATHAM, Ont., Sept. 2.

In Peace River district, northern Alberta, the Peace River Drilling Co.'s test, about 30 miles north of Peace River town, has finished dry at 905 feet. The operations were conducted in the nature of an experiment, after a number of local companies had made unsuccessful efforts to get below the big water vein and several wells had been lost owing to water troubles. The venture was backed largely by Toronto capital, and the work was in charge of F. H. Stover, a driller with many years' experience in the Ontario fields. Drilling started early in the summer and rapid progress was made, the water being successfully shut off during the drilling. After getting below the water vein, no oil was encountered, and the test was abandoned. The test is regarded as definitely condemning the Peace River area as a possible source of commercial oil or gas. Several other companies have been active in the same district recently, and it is not yet known whether these ventures will be abandoned or not.

### Southern Field

The most important activities at present are those in the Sweetgrass Field of southern Alberta. On the Montana side, the Gladys-Belle-Larson well on Section 18-35-2w is reported a producer, with oil standing 650 feet in the hole. The California well, Section 26-35-2w, is reported to have struck oil. These are two tests in the furtherest south portion of the Sunburst Field, and, according to later summaries, make a total of 11 producers, besides three gassers, with an aggregate daily field production in sight of about 500 to 550 bbls. On the northern edge of the Sunburst Field, the Sunburst-Boyce's No. 1, SW, Section 23-36-2w, 9 miles south of the international boundary, is reported to have developed a big gasser, estimated at 10,000,000 feet, with 1,200 pounds pressure.

Before hitting the gas vein, a stray water vein was encountered at 1,680 feet, and the well blew gas and water over the derrick, with some traces of oil. The well is somewhat similar to the big gasser developed by United Oils (Ltd.) at Etzikom Coulee, on the Canadian side, some years ago, and later drowned out by water. Efforts will be made to shut off the gas and water and drill deeper for oil. This is the furtherest north test in Montana, except the Coe well, which has been troubled by caving, but has put in 10-inch casing and resumed drilling. The Ohio-Hannon well is reported to have been shot, developing a 50-bbl. producer of rather heavy oil.

In the Canadian Sweetgrass district, north of the boundary, the Coutts-Sweetgrass Oils (McLean), Section 1-1-15-4, is reported drilling below 1,300 feet. The Lethbridge Oils (Baalim Syndicate), Section 12-1-15-4, is drilling below 700 feet. Drilling outfits in this area are arranging to run on crude oil, which is being delivered in tank trucks from the Sunburst Field. The Border Oils (Ltd.), Section 6-1-14-4, diamond drilling test, has spudded in. Geologists believe that the drilling in the Coutts-Sweetgrass district on the Canadian side will be deeper than in the Sunburst Field, and that production, if any, will be got between 1,900 and 2,200 feet. Beattie-Bow Island Syndicate, Section 15-1-15-4, is drilling. Imperial Oils (Ltd.), Section 5-1-16-4, is rigged up. Maughan Syndicate, Section 11-1-15-4, McDonnell-Phillips Syndicate, Section 13-1-15-4, and Oil Lands Exploration Co., Section 2-1-15-4, are all drilling. Southern Alberta Oils (Ltd) is rigging up a test on Section 24-1-15-4.

### Describes Sweetgrass Arch

A recent visitor to the field writes thus regarding the Canadian development: "The Sweetgrass arch is supposed to extend some 250 miles from Central Montana up into Alberta. Extending from the geological maps of the Montana area, the anticlinal axis of this very broad structure crosses the international line northward through Sections 1, 12, 13, 14, 23, 24, 26 and 35 of Township 1, and Sections 2, 3, 10, 15, 22, 27, 28 and 33 of Township 2, Range 15, west of the Fourth Meridian, in Canada. Section 1, Township 1, Range 15, west of the Fourth, where it enters Canada, is just 3½ miles east of Coutts, and the oil development on the Canadian side is largely confined so far to the township in which Coutts is located.

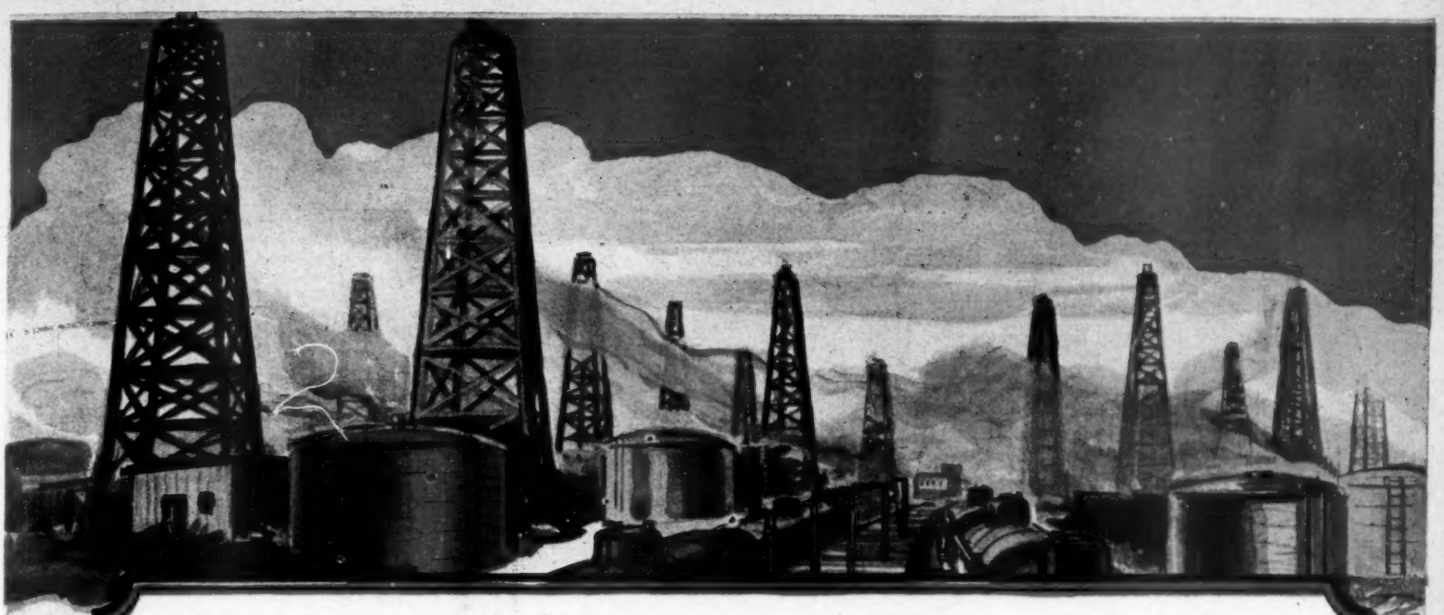
"The term 'arch' is likely to be misleading to the ordinary man if he expects to see it in the form of a surface upheaval. The unheaval is there, hundreds of feet below the surface, in the rock formations, but the surface is merely the Alberta-Montana prairie, scored and cut by coulees and draws. The rock hounds have traced the arch through various means, too long to outline here; suffice, that the crest of the arch runs northwesterly into Canada for a considerable distance, all the time pitching gradually downward so that eventually it goes too deep for drilling. Just where this point is can only be definitely determined by drilling. These are the views of geologists on the scene, on which all of them generally agree.

### Sands of Cretaceous

"Unlike the formations of the northwest territory, where Imperial Oil and other companies have been searching in rocks of Devonian age, the oil sands in the Sweetgrass arch belong to the Cretaceous era. The Colorado and the Benton shales and Madison limestones are some of the strata in which the drills are working.

"According to one geologist, the Sweetgrass arch (on the Canadian side) is a very extensive formation, an exceptionally broad fold, with a very gentle slope on each side, and a slight pitch downward toward the north. The effect of this is to offer a very broad area in which to drill on either side of the axis.

"The gradual slope downward to the north, estimated at 48 feet to the mile,



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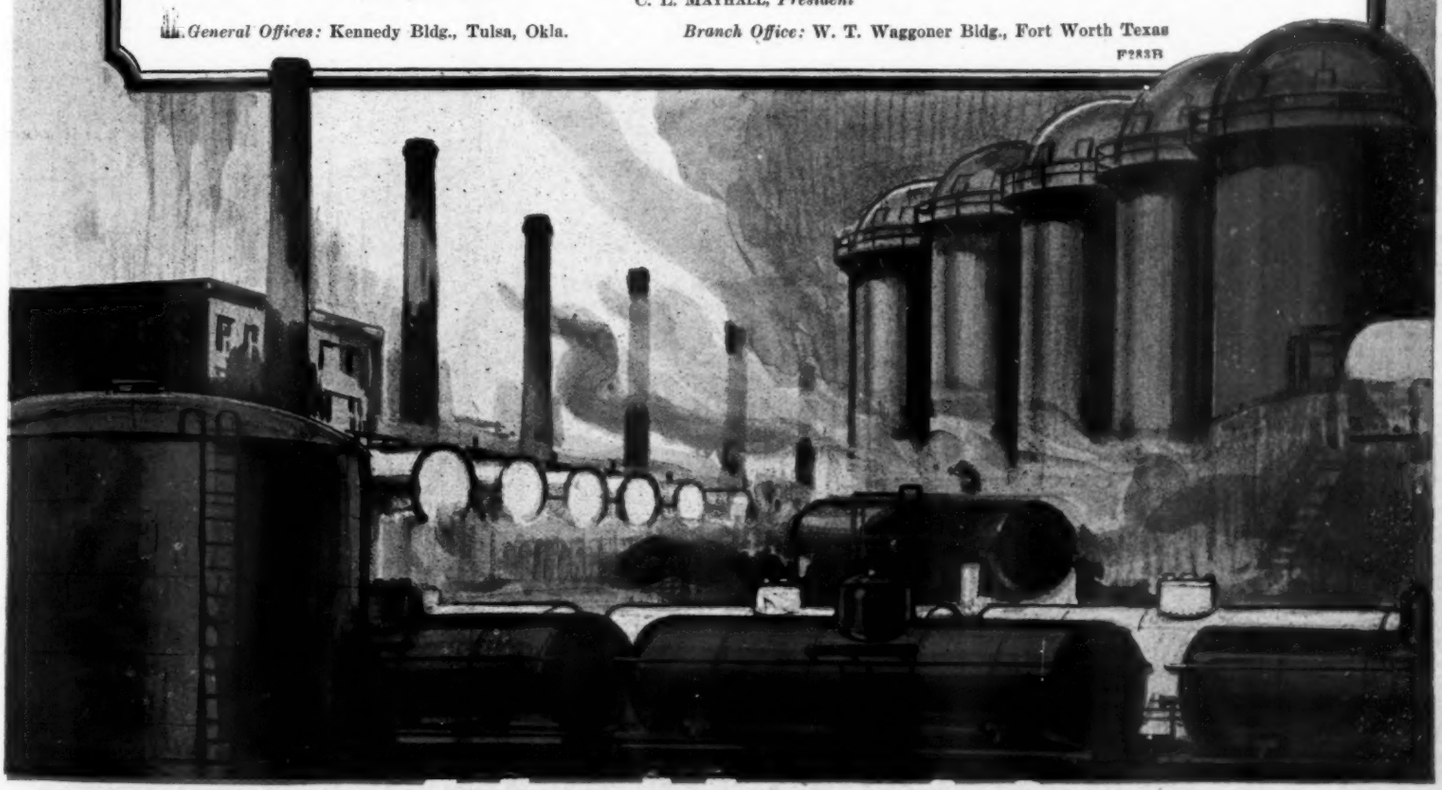

means that the oil, traveling upward through ages of time, would have a long way to migrate. As the oil now being found on the Montana side is a very high grade, light oil, possibilities exist that further north, on the Canadian side, the drills may pierce a larger pool of heavier oil from which the light oil has migrated.

"There is not the slightest possibility that this formation extends on up to Lethbridge and Calgary. In fact, a few townships north of the boundary, a reverse process begins to appear, a geological hollow or syncline with much older formations near the surface.

"These are the general geological features. There are some modifications. Some of the geologists assert that just at the boundary there is a subsidiary uplift of the main arch, known as the Boundary Dome. Six or seven miles west of Coutts, on the boundary, there is another similar uplift, known as the Blarney Castle Dome. There may be others not yet mapped out.

"Leaving the town of Coutts to the east, on the road paralleling the international boundary, the traveler sees evidence of oil drilling activity at every mile. In the very first mile, rig timbers are piled up awaiting the builders, who will put up a second derrick for the Livingston-McLean Syndicate, Section 4-1-15-4. On the adjoining section, east, Section 3-1-15-4, the crew of the McCullough-Patterson Syndicate is rigging up. On Section 2-1-15-4, adjacent to the McCullough-Patterson holdings, drillers at work for the Somerville Syndicate (Oil Lands Exploration Co.) have a test down more than 75 feet.

"On Section 1-1-15-4, in the southwest corner of the township, is the first well spudded in on the Canadian side. It is being drilled by the Coutts-Sweetgrass Oils (Ltd.), the financial backers of which includes Hon. Archie McLean, former minister of public works for Alberta, and Hon. C. R. Mitchell, former provincial treasurer. This well is down 1,300 feet and the drillers are making fast time.

**Wells All Near Boundary**

"All these locations are within a few hundred yards of the international boundary.

"Immediately north of the Coutts-Sweetgrass well is that of Lethbridge Oils (Ltd.) on Section 12-1-15-4, of which A. G. Baalim, head of the Baalim Motor Co., of Lethbridge, is field manager. This test is drilling around 700 feet.

"Just east of the Baalim well, Section Section 11-1-15-4, is the Livingston Syndicate's well, drilling below 600 feet. On the section north of the Baalim well, Section 13-1-15-4, is the McDonell-Phillips Syndicate's well, below 75 feet. North of this, again on Section 24-1-15-4, is Livingston's No. 2, which is just rigging up. This last location is about 4 miles due north of the international boundary.

"The drilling in Township 1-15-4 is being done under rather peculiar leasehold conditions, which conduce to swift development. All of this township is included in what is known as the Quarantine lease. It was a reserve area held by the Federal Government for the holding in quarantine of cattle brought over from the American side. This reserve area not only covered all of the township referred to, but extended north into the lower part of Township 2 as far as Milk River, and west into the northeast corner of Township 1, Range 16, as far as the C. P. railway.

"The Federal Government refused to issue regulation oil leases in this area. Instead, it issued permits to companies and syndicates to go in and file on a restricted area. They were then allowed only 90 days to get their rigs on the ground. This 90 days has now expired, and all those who had permits and failed to get their rigs in have had the permits cancelled, the Federal Government retaining the mineral rights to be disposed of at its option.

"All adjacent area to this particular township is, however, under the usual leasing regulations. On Section 6-1-14-4, which is the next section east of that on which the Coutts-Sweetgrass Oils (Ltd.) is drilling the Border Oils (Ltd.) backed by Edmonton capital, has started work with a diamond drill. All these concerns are drilling or about to drill either on the crest of the Sweetgrass arch, where it enters Canada, or within a few miles of it on either side.

"On Section 1-1-14-4, 6 miles east of the Coutts-Sweetgrass Oils (Ltd.), a location has been made by the Jones Syndicate, just on the Canadian side of the international boundary. Imperial Oil (Ltd.) has, however, chosen its location much farther to the west, in fact, about 7 miles west of the town of Coutts, in Section 5-1-16-4, which is less than 1 mile from the international boundary. This test is rigging up.

**Lack of Water a Difficulty**

"One of the greatest difficulties the new companies drilling on the Canadian side are meeting is that of finding sufficient water for the boilers. The first wells going in had to have water hauled by teams to supply the men erecting the derricks and machinery. Most of them are now drilling their own water wells. Some of them were lucky at the first attempt, and got water at depths of 100 feet or so, while others had to drill a second time before they got a sufficient supply. To be sure of continuing work, the companies have to put in water storage tanks, pumping them full from the water wells, and this is an added expense in drilling.

"In addition to these companies, drilling in or close to Township 1-15-4, along the international boundary on the Canadian side, oil exploration has been proceeding for some years past at points considerably east and north. The Thompson Oil Co. has a test down several hundred feet in the Bird Sanctuary reserve of Pakowki Lake, but work has been temporarily suspended. Pakowki Lake lies in Townships 5 and 6, Ranges 7 and 8, west of the 4th, and the location is on an island in the lake.

"Between this point and the international boundary at Coutts, geologists have been hunting oil indications for several years past. The Foremost gas field lies about 20 miles west. Some seven years ago United Oils (Ltd.), of Calgary, drilling near Foremost, struck a big gas flow. South of Foremost, the Beaver Oils (Ltd.) and the Western Union Oil Co. drilled on opposite banks of Milk River, but work was suspended owing to the war."

In Irma district, central Alberta, Gratton No. 1, Imperial Oil (Ltd.), Section 18-45-7-4, is once more drilling. Wainwright Oil & Development Co., Section 36-44-7-4, has spudded in. In Monitor district, the West Regent Oil & Gas Co. test, Section 19-34-4-4, and Imperial Oil (Ltd.) Misty Hills test, Section 29-34-4-4, are both drilling around 3,000 feet. This field is coming to look like an extra deep drilling proposition. In the same area, Mud Buttes Oilfields (Ltd.), Section 1-34-5-4, and the Knuckle Dome Syndicate, Section 19-23-4-4, are reported shut down.

# California Field Operations

*By C. H. GILMAN*

Three good wells were completed at Huntington Beach, the Standard Oil Co.'s No. 1 Surf coming in at 600 bbls., the No. 8 Copeland of Union Oil Co. having an initial flow of 1,100 bbls., and the Shell Oil Co.'s No. 1 Slater, good for 500 bbls. Active development at Long Beach and Santa Fe Springs diverting interest from other sections. Production at Huntington Beach expected to drop.

LOS ANGELES, Calif., Sept. 2.

The present active development work concentrated at Long Beach and Santa Fe Springs has diverted all interest from other sections surrounding the two fields and nothing of importance is now going on in the Inglewood-Hawthorne-Redondo districts. In fact, operations at Inglewood have ceased. At Huntington Beach, there is every probability of a decline rather than an increase for the future, so that no fear is held of this field adding to the surplus beyond its present capacity, which no doubt reached its apex around 30,000 bbls. a day. Long Beach and Santa Fe Springs, however, are the two districts that are responsible for the big increase in surplus.

A parallel case to the prolific sections at Long Beach might be cited in the Coyote Hills, where the whole district, consisting of 2,000 or 3,000 acres, was under the control of the Standard Oil Co. Here, in the field's earlier days, one well alone produced as high as 12,000 bbls. a day, which is more than twice as much as the largest well ever drilled at Long Beach, and it is not improbable that had the district been cut up into small leases, as is the Long Beach Field, it would long since have become exhausted. But the Standard had no reason for rapidly developing their holdings and the result is that by conservative drilling the natural resources are simply being taken as necessity requires and the district will hold its own for a long time to come.

At Huntington Beach, the week ending August 26 shows a daily average production of 32,911 bbls., which is 323 bbls. a day above the average of the week previous, although three new wells were reported with a total initial production of 2,200 bbls. a day. This will tend to show the actual decline in many of the older wells which require constant care and expense in keeping up an average. Nothing is being done in the way of new work. No new rigs were built and the total number of wells drilling is 126, or two less than the week before.

**Three Good Completions**

The Standard completed No. 1 Surf at 4,430 feet. The oil has a gravity test of 23 degrees and the well started at 600 bbls. a day. Surf No. 1 was one of the first wells started in the field. Its depth was 3,750 feet, but the well proved a poor producer of heavy oil. No. 2, with its better showing, lends more importance in broadening the production area, although much will depend on its staying qualities, as the extreme depth offers little inducements for any great amount of new development when the cost of drilling is taken into consideration.

The completion by the Union Oil Co. of Copeland No. 8 was the best of the week. It was finished at 4,250 feet and its initial flow was 1,100 bbls. a day. It has 782 feet of perforated casing and the gas pressure registered 810 pounds. The oil is 27 gravity. Many of the wells completed here are much shallower, and with deeper drilling may prove much more productive.

The Shell Co. completed No. 1 on the Slater lease at 4,461 feet. The oil has a gravity of 22 degrees and the well is producing 500 bbls. a day. This well has 285 feet of perforated pipe and the back pressure is 550 pounds at the casinghead.

The Pacific Petroleum Corporation has the machinery ordered for a gasoline plant in this field. It will have a capacity for handling 2,000,000 feet of gas per day and possibly will produce 1,000 gallons of gasoline. It will be operated on a combination plan, using both the absorption and compressor systems. Several other companies are contemplating installing gasoline plants and this line of effort will prove a valuable asset and at the same time conserve much of the gasoline content from the vast amount of gas now being produced in the field.

With the big results coming from Signal Hill, this section of the country will pass into history as one of the most rapidly developed fields in the State, for at this time there is every evidence of a rapid decline. While many estimates have been given out as to the actual production of the field, the most conservative reports obtainable show a daily average for the week ending August 19 of 75,300 bbls. from a total of 76 wells. Flush production from some of the largest producers may have shown a slightly higher average, as at one time the daily yield was above 80,000 bbls. The heavy gas pressure which caused many blowouts with the opening of the field has become exhausted and in many of the wells water has broken in to an alarming extent and many predict a very rapid decline from this time on.

**The Field at Large**

There was no appreciable change in the amount of new work starting for the week ending August 26, the report of the State Mining Bureau showing a total of 22 permits issued for new drilling wells. At Long Beach, five were started, the Dabney Oil Syndicate having two, S. Hoekel, Moore & Tobias and the Windermore Oil Co. one each. At Santa Fe Springs, the General Petroleum Co. started three and the Shell Co. one. One at Huntington Beach by the Shell Co., No. 1 by the White Star Oil Co., and one by the Amalgamated at Redondo. East of Puente, the Mascot Oil Co. is drilling a test and the Standard has located a test in Section 15-3-11, Los Angeles County. Dolke & Thomas have shifted the rig and will start a new hole in Coyote Hills.

At Bardsdale, Ventura County, the Montebello Oil Co. is drilling No. 24. On the Western Union lease, at Santa Maria, the Shell Co. has started No. 92. The No. 2 well of the Calitrolum Oil Co. is drilling at Sunset; two by the Pacific Oil Co. at Midway; No. 3 Bangor Oil Co. at Kern River, and No. 15 by the Paragon Oil Co. at Conlinga.

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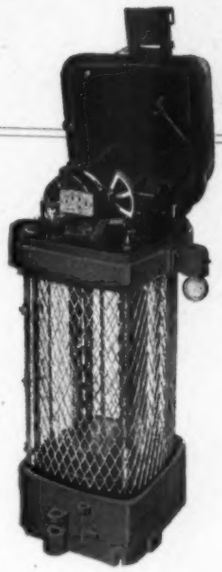

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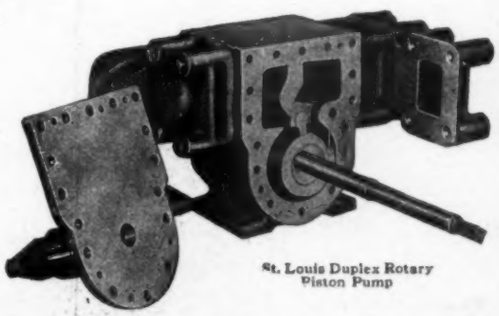
4. **INTERLOCKING**—The three actions—filling, discharging and night draining—absolutely interlock; only one can be performed at a time. This makes impossible any tampering with the pump's established accuracy.
5. **METER**—A specially designed meter is mounted in the top of the pump. This operates and records only the gasoline discharged through the hose.
6. **MONEL METAL FILTER**—The extra large rust and corrosion proof filter is mounted on the suction side of the pump. The filter medium can be cleaned and replaced by an average operator in 4 minutes; while the water draw-off is readily accessible.
7. **HAND OR POWER**—Operated by either hand or electricity. It is a fast pump in either case. The same pumping unit is used. To change from hand to power, or from power to hand operation, with the combination unit is a matter of seconds.
8. **VISIBILITY**—Perfect visibility of both the quantity and quality of gasoline, both to the buyer and the seller, is attained in this unit. The visibly accurate measure is totally independent of the pumping function and of all mechanical wear—once accurate, it remains accurate, conforming to the tolerances allowed by the Department of Weights and Measures of the Bureau of Standards.
9. **CONSTRUCTION**—The housing of this big pump is of pressed steel, almost unbreakable; within, every part is accurately made—there are no threaded pipe fittings—all fittings are flanged and have ground surfaces. The entire design and constructions make the unit readily renewable.
10. **MOTOR**—The motor is a vapor-proof, fully encased unit. It is silent, powerful and long lived. It consumes a minimum amount of current for the work done and assures lowest operating expense. All wiring and electrical fittings are completely isolated.

Every unit of St. Louis equipment conforms to the standards of the Underwriters Laboratories and bears their label.

*Engineers and manufacturers of hand and power equipment for storage, distribution, measurement of oils, gasoline and similar liquids from refinery to filling stations.*



St. Louis Duplex Rotary Piston Pump

## St. Louis Pump & Equipment Co.

3719 FOREST PARK BLVD., ST. LOUIS, MO.

RESIST MALONEY PATENTED BOLTED TANKS RUST

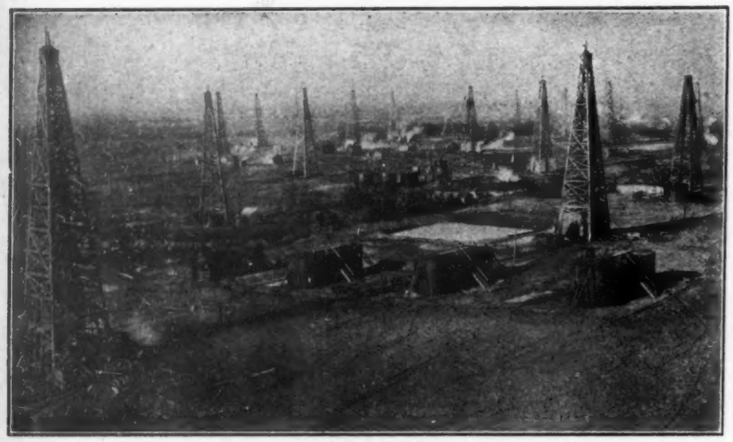
# MALONEY

## THE ORIGINAL

# Bolted Steel Tank

(Patented Oct. 21, 1913)

Accurately manufactured of Rust Resisting Keystone Copper Steel, the Maloney is adaptable to all weather and climates. It gives the maximum service at the minimum cost. It meets all the requirements of tight deck construction to conserve evaporation. They are durable and dependable.



*Eight 1,000-bbl. Maloney Tanks in foreground and nine in the background in the Mexia (Tex.) Field*

Decks have tight manhole with packed joints—also flanges for gauging and inlet purposes—the same construction Throughout the deck as balance of tank. Cleaning-out plate in the side flush with bottom—easily removed—tank cleaned —plate replaced without getting inside of tank—one-man job and no risk from gases. Specify Maloney Rust-Resisting Copper Steel Tanks.

Made of KEYSTONE COPPER STEEL

*Sizes 40 bbl. to 2,000 bbl. Inclusive*

MANUFACTURED BY

**Maloney Tank Manufacturing Company**

**Office and Factory: Tulsa, U. S. A.**

Descriptive Catalog C Mailed to any address

*Modernly equipped Export Department gives prompt and dependable service.. Tanks, knocked down, securely packed in steel bound crates, easily handled at port.*

# Late News from the Fields

## OKLAHOMA-KANSAS

There were several important developments in Oklahoma during the latter part of the week in review, including another wildcat producing well in Creek County and an encouraging showing of gas from one in Pawnee County. Creek County also showed some more important failures.

Jake Bearman evidently has a Wilcox sand producer in the NW cor. S half NE, Section 26-16-8, Creek County, in wildcat territory. This well found the top of the pay at 3,648 feet and besides making some gas made one good flow of oil. It was too early, however, to estimate the size of the well.

In Pawnee County, near the city of Pawnee, the Wilcox Oil & Gas Co. had a showing of gas from sand at 3,110 feet and was running the 6-inch casing. The well is located on the Meeker farm in the NE cor. SE, Section 5-21-5e.

The Prairie Oil & Gas Co., which appears to have gone in for a thorough test of Creek County deep sand possibilities regardless of cost, has another failure in the Wilcox sand in the SE cor. SW, Section 27-15-8, where the company drilled into water at 3,680 feet.

In Section 29-16-8, same county, the company had better luck, however, and have a well in the Wilcox sand in the CSL SW SE, on the Kennell farm. The well flowed 55 bbls. in 12 hours from pay at 3,768-3,780 feet.

The Texas Co. has a well in what is probably the Dutcher sand, in Section 5-15-8, west of the production in the pool in which the Roland Oil Co. brought in its big well. It has made one small flow from pay topped at 3,240 feet.

T. B. Slick seems to have failed to get pay in the Dutcher sand in the SE cor. NW, Section 21-14-8. The test drilled through a broken formation with no pay at 3,134-62 feet.

The Prairie Oil & Gas Co. has another deep test with water in the Wilcox sand, in the NW cor. NE, Section 11-15-8. The well had a hole full of water from sand at 3,740-90 feet.

A test that was being closely watched for a possible extension east of the big production found by the Roland Oil Co. has drilled into water in the Dutcher sand. This was the Tibbons test, NW cor. SW SW, Section 1-15-8, about a half mile west of production. The water was found in sand at 3,187-3,200 feet.

### Texas After High-Grade Crude

The Texas Co. has announced that it will pay $1.50 per barrel for oil of 38 gravity or higher in Township 14-8, Bristow Field, Creek County. The Texas Co. has, for some time, been paying $1.50 for 38 gravity oil in the Lyons-Quinn Pool, in Okfuskee County.

### Big Wells in North Billings

Two more good wells were completed in the North Billings Field, Noble County. The Comar Oil Co.'s No. 10 See, SW cor. NW NW, Section 15-24-1w, found the deep sand at 2,629-41 feet and the well flowed 889 bbls. the first 24 hours and 1,024 bbls. the second 24 hours. The Southwestern Petroleum Co. brought in one of the best deep-sand wells so far completed in the field, it being No. 14, CSL SE SW SE, Section 10-24-1w. The well found the pay higher than other wells in the vicinity and flowed 2,290 bbls. the first 24 hours from sand at 2,619-27 feet.

The test drilled by Harry Diamond and others in Hughes County, C SE, Section 36-8-8, does not now look as if it would be a producing well. The Penn West sand was found at 3,120 feet, but a shot with 40 quarts of nitro caused a bridge and when it was cleaned out no production appeared.

### Kansas Completions

Completions in Kansas this week were greatly decreased in both size and numbers. Butler County had only three completions, two of which were dry. Johnson & Stone, in the Fox-Bush Field, completed No. 1 Cameron, CSL SE, Section 22-28-5, dry after a shot with 80 quarts in sand at 2,770-85 feet. This was the regular Fox-Bush pay. The Great Southern Oil Co. got a 20-bbl. well in No. 26 Dickinson, NE cor. SE SW, Section 16-26-8. The pay was at 2,468-80 feet and it was shot with 30 quarts. R. G. Miller and others found the lime dry at 2,910 feet in No. 1 Kememer, SW cor. Section 26-29-7, and the well was abandoned at a total depth of 3,100 feet.

In Greenwood County, there were four completions, a fifth reported being a last week's well. This well was the Johnson & Vickers' No. 2 Seely, NW cor. SW, Section 5-23-11. It was reported last week as a 300-bbl. well, but more accurate reports show it as starting at 225 bbls. daily. C. A. Conley completed a 2,000,000-foot gasser in No. 1 Tate, SE cor. NW, Section 26-30-9, after a shot with 70 quarts in sand at 1,502-28 feet. The shooting of a gasser is unusual. C. E. Christy drilled into a hole full of water in No. 1 Conrad, CEL NW SE, Section 13-29-9, lime at 2,037 feet, total depth 2,087 feet. In the new field, near Eureka, the Rogers & McGinnis test, No. 3 Sample, SE cor. SW NE, Section 35-25-10, was completed dry. A shot in sand at 2,020-65 feet failed to result in production. The Atlantic Petroleum Co. completed a 15-bbl. well in No. 10 Shambough, NE cor. Section 22-23-13, sand at 1,790-1,822 feet and shot with 140 quarts. R. G. Gillespie has a 35-bbl. natural well in No. 5 Swanson, 920 feet north and 760 feet west of the southeast corner of Section 20-23-13. Pay was found at 1,703-22 feet.

In Marion County, the Prairie Oil & Gas Co. failed to get pay in Section 32-21-5, No. 2 Bruce, CNL NW NE SE, drilling into a hole full of water at 2,416-32 feet and abandoned the well at that depth.

## LATE MEXICAN NEWS

TAMPICO, Mexico, Sept. 2.—Transcontinental Petroleum Co.'s well No. 2, Lot 4 Cacalilao, in the Panuco Field, which was reported a big gasser late last week at 1,655 feet, with oil following the gas, is now reported a 2,500-bbl. well. As will be noted, the well is shallow and exploitation may result in even more production. Mexican Eagle Oil Co.'s No. 9 Cerro Veijo, in the South Fields, has not yet been tested for production, as heavy rains the past few days have delayed operations throughout the entire district The tools are in the hole with about 1,000 feet of cable.

When this well "blew in" a dry gasser, and it was permitted to flow the gas to see if oil would follow, the company's nearby No. 2, which has been producing 20,000 bbls. plus right along since last June, was affected and had to be pinched in. With No. 9 closed, however, as the oil commenced to appear following the gas, No. 2 came back easily good for 16,000 bbls. Mexican Eagle probably will follow its practice in San Geronimo, and when No. 9 is placed in the production column No. 2 will be closed, as No. 9 is 53 feet higher (subsea level) than is the latter.

East Coast Oil Co.'s No. 21 Los Potrerillos, in the Panuco Pool, is complete at 2,123 feet, rated at 550 bbls. The Texas Co.'s No. 9 Silva, Lot 15 Lomas y Llanos, reported a salt water well with considerable pressure at 2,143 feet, is now reported good for an 800-bbl. stripper through a choker, the oil coming from the 2,000-foot level, plus, where the drill had encountered a good showing as it descended.

Toteco is stripping around 90,000 bbls. from 11 wells, a loss of about 10,000 bbls. a day, Mexican Gulf Oil Co. leading the Huasteca Petroleum Co., which, in turn, leads International Petroleum Co., which shows the largest loss of free oil.

G.B.

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KEYSTONE COPPER STEEL

*Gives Maximum Rust Resistance*

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*Culverts, Flumes, Chutes, Steel Barrels, Roofing, Siding, Etc.*

Soft and ductile of itself, copper is the martial music that adds the grit of fight wherever rust destroys. It is unexcelled for tank manufacture and for oil country uses. The increased life of steel when alloyed with copper is a well established metallurgical fact. It gives more wear.

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For Black and Galvanized Sheets, Tank and Culvert Stock, Formed Roofing and Siding Products, etc., demand Keystone Quality. Its use is real economy. These products are sold by leading metal merchants.

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# Pure Oil Co's Marcus Hook Refinery

## A Complete Equipment for the Extraction of Everything Useful That Crude Petroleum Contains. Distributing Stations

By E. M. Tharp

Pure Oil Co.'s Marcus Hook refinery justifies the dictum of economic engineers relative to the importance of industrial location close to markets and transportation. It justifies this as against the relative advantages of location adjacent to raw materials when either one or both of the other factors may be absent. Situated 16 miles south of Philadelphia, on the Delaware River, Marcus Hook received first historic recognition of its port advantages when William Penn and his party landed there. It was a double-acting transportation influence that drew the Pure Oil Co. to this point. Facilities on tide water permitting vessels of the deepest draft were sought and organized opposition against the eastward construction of the company's pipe lines left it no other place to locate. There is a striking parallel in the impulses that landed William Penn and Pure Oil at Marcus Hook.

Owing its inception to the oil production of western Pennsylvania, the company deliberately moved away from raw material in establishing its refinery at Marcus Hook. Of course, it was not far away and the company had its pipe line system behind it and even then the project did not reflect definite determination of policy as to refinery location. At the present time the company has another refinery in western Pennsylvania, one in West Virginia, one in Ohio, two in Oklahoma and one in Minnesota. But when Pure Oil built its refinery at Marcus Hook, in 1903, it was seeking markets primarily—markets and transportation.

Development of the company's Marcus Hook facilities and the growth of its volume at this point suggests that these factors have outstanding importance as against any other considerations of location.

### Its Modest Beginning

In the beginning, this plant had a capacity of refining 1,000 bbls. a day and its outlet was largely in exports to Europe. At that time the entire facilities occupied but five acres with frontage on the Delaware River. Refining capacity is now rated at 3,500 bbls. a day, though 6,000 bbls. have been run through in a single day. The plant now covers 62 acres, having river frontage with wharfage facilities capable of any shipping requirements. An application now pending before port officials contemplates an addition to this capacity by the construction of 100 feet extension to the company's dock.

Marcus Hook is as convenient to the petroleum markets of Europe as any port of this country. Over and beyond this fact, however, is its situation as an integral part of an area constituting the largest petroleum consuming market in the world. It is not only a clearing house for the rapidly increasing export business of the Pure Oil Co., but it is strategically related to the company's eastern marketing operations.

### Pioneer at Marcus Hook

When the refinery was started, in 1903, practically the only other industry at Marcus Hook was a small iron foundry. A pleasure park, known as Linden Park, just east of the Pure Oil property, has since been occupied by the Sun Co.'s plant. Pure Oil's original equipment here was comparatively small, being a battery of six steam refined stills, two agitators, one continuous steam still and a limited takage. When first built the refinery was intended only for handling Pennsylvania crudes, but it is now handling both Pennsylvania and western crudes. It has been handling a large volume of Mexia, Texas, crude, brought by tankers from the Humphreys-Pure Oil Pipe Line Co. terminus at Smith's Bluff, on the Gulf Coast of Texas.

The plant is directly connected with the producing fields of western Pennsylvania, West Virginia and Ohio by the lines of the Pure Oil Pipe Line Co. At Morgantown, W. Va., these lines connect with the system of the Eureka Pipe Line Co., through which tenders of oil from Oklahoma and Kansas can be made at any time. In addition, the terminal of the United States Pipe Line Co., controlled by the Pure Oil Co., is adjacent to the refineries and makes possible the handling of large quantities of standard white and water white refined petroleum, from refineries in the western part of Pennsylvania, for export. This pipe line system includes a 4-inch and a 5-inch line and is the only system in the world for the transportation of refined products.

### Description of Property

With covering a frontage of 1,600 feet on the Delaware River, the Pure Oil refinery property compactly covers an area stretching back from the river for a distance of nearly a mile, and beyond this, 4 miles northwest, is its tank farm of 290 acres. Elevations have given fortunate opportunity for the utilization of gravity throughout plant arrangement, beginning back at the tank farm, which is 320 feet higher than the refineries, permitting gravity movement of oil from storage to plant. Similarly gravity has been made useful in moving petroleum products about the plant.

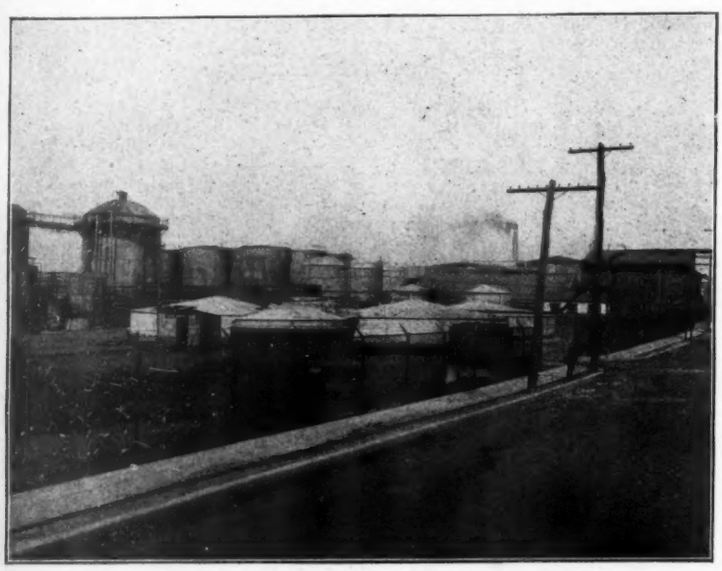
Near the center of its river frontage a fill with piles and dirt made available an area 450 feet wide extending out 300 feet into the river and on this is located warehouses, a ship kitchen, pump stations and a boiler house. Part of the barreling plant also is located on this ground space. The dock extends 400 feet out from this filled-in area and it is proposed to extend it an additional 100 feet. Two ships have been loaded or unloaded at this dock at one time and the addition planned will give greater capacity. The dock is 75 feet wide and there is a warehouse built through the center of it 250 feet long by 40 feet wide. A track of the Philadelphia & Reading Railroad runs out on this dock, paralleling the warehouse. Back of the dock and setting at right angles to the railroad is a second warehouse 150 feet long by 40 feet wide. Some idea of the importance of these facilities may be demonstrated by the fact that the major part of the gasoline supplies for the aviation units of the United States were shipped from here. In this movement there were 1,825 cars handled over this dock, not including the supplies contributed by the Pure Oil Co., which amounted to about 10 per cent of the total volume.

Pumping equipment for the dock is conveniently located on the filled ground area, occupying two buildings 25 by 40 feet each, and powered from a boiler house nearby, occupying a building 35 by 60 feet.

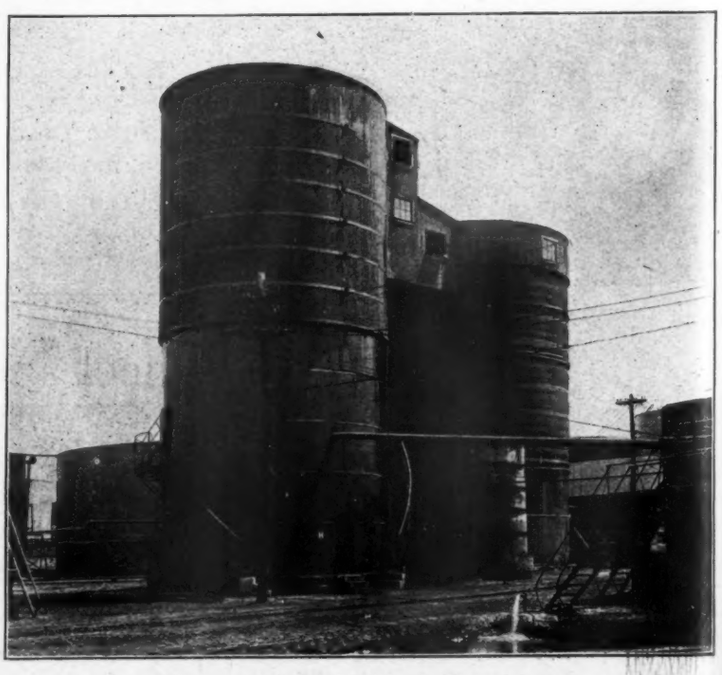
Paralleling the railroad through this part of the Pure Oil property are the buildings of the cooper shop, compounding department and the barreling department, covering a ground area of 160 feet wide by 475 feet long and extending from Second Street, which runs east and west through the property, to within 150 feet of the dock. It is in the coopering shops and barreling department that some of the most interesting features of the plant may be found. The cooper shop has three automatic hoop drivers, barrel washing machine and other coopering equipment. The barrel painting, filling, glueing and weighing sections adjoin. There are facilities for 44 automatic fillers in these buildings and when the raw barrel has gone into the cooper shop, it passes through all the processes progressively, emerging from the filling rooms painted, filled, weighed, stenciled and marked and gravitates on a runway to the warehouse or the dock, ready to be loaded into ship or barge. This plant has an average capacity for steaming 1,200 bbls. a day; painting 1,500 bbls. a day; filling with cylinder oil, 1,500 bbls. a day; filling with water white, 350 bbls. per hour; filling drums with gasoline, 1,500 per day, weighing and stenciling, 350 per hour, and loading on a vessel, 2,000 bbls. a day average, although as high as 4,000 bbls. have been loaded in a single day.

The compounding department adjoins the barreling plants and has the full complement of equipment, including mixing tanks, kettles, blowers, pumps and other apparatus for a large volume output. This department has expanded and

(Continued on Page 74.)



View of agitators and bleachers, with office in the distance.



Photographic view of H. & I. paraffine agitators.

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Pure Oil Products are a sure and safe ground on which to stake your reputation.

From first to last they are quality goods—made from premium crudes, refined by improved methods in the company's seven refineries.

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# REFINERY AND CRUDE PRICES

**Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields**

## GASOLINE AND NAPHTHA

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 50-52 450 end point (Naphtha) | .10½ | .11½ | .11 | .12 | .12 | .12½ |
| 56-58 450 end point | .13¾ | .14½ | .13¼ | .14½ | .13½ | .14½ |
| 58-60 437 end point (New Navy) | .14½ | .15 | .14¼ | .15¼ | .15 | .15½ |
| 60-62 400 end point | .17 | .17½ | .16½ | .17 | .16½ | .17 |
| 64-66 375 end point | .18 | .18½ | .18 | .18½ | .18½ | .19 |
| 68-70 360 end point | .19½ | .20 | .19 | .20 | .19½ | .20 |
| **OKLAHOMA (Group 3)—** | | | | | | |
| 50-52 450 end point (Naphtha) | .12½ | .12¾ | .12½ | .13 | .12½ | .12¾ |
| 56-58 450 end point | .13¼ | .13½ | .13½ | .13¼ | .13¾ | .14 |
| 56-58 437 end point (New Navy) | .14 | .14½ | .14 | .14½ | .14 | .14¼ |
| 58-60 437 end point (New Navy) | .14¼ | .14½ | .14½ | .14¾ | .14½ | .14¾ |
| 60-62 400 end point | .17¼ | .17½ | .17¼ | .17½ | .16½ | .17 |
| 64-66 375 end point | .18¼ | .18½ | .18¼ | .18½ | .18 | .18½ |
| 68-70 350-365 end point | .20 | .20¼ | .20 | .20¼ | .19½ | .20 |
| **NORTH TEXAS—** | | | | | | |
| 48-52 450 end point | .10½ | .11 | .10½ | .11 | .11 | .11½ |
| 50-52 440 end point (Naphtha) | .11 | .11½ | .11 | .11½ | .11 | .11½ |
| 56-58 450 end point | .12½ | .13 | .12½ | .13 | .13¼ | .13½ |
| 58-60 437 end point (New Navy) | .13½ | .14 | .13½ | .14 | .13¾ | .14¼ |
| 60-62 400 end point | .15½ | .16 | .15½ | .16 | .15½ | .16 |
| 64-66 390 end point | .16½ | .17 | .16½ | .17 | .16½ | .17 |
| **NORTH LOUISIANA-SOUTH ARKANSAS—** | | | | | | |
| 58-60 437 end point (New Navy) | .14½ | | .14½ | | .14 | |
| 56-58 450 end point | .13½ | | .13½ | | .13½ | |
| 64-66 400 end point | .18½ | | .18 | | .17 | |
| **ROCKY MOUNTAIN STATES—** | | | | | | |
| 58-60 437 end point (New Navy) | .20 | | .20 | | .20 | |
| **PENNSYLVANIA—** | | | | | | |
| 52 Naphtha | .16 | | .16 | | .16 | |
| 54 Naphtha | .17½ | | .17½ | | .17½ | |
| 56 Gasoline | .18 | | .18 | | .18 | |
| 58 Gasoline | .18½ | | .18½ | | .18½ | |
| 60 Gasoline | .19½ | | .19¾ | | .19¾ | |
| 62 Gasoline | .21⅜ | | .22½ | | .22½ | |
| 64 Gasoline | .22¾ | | .22¾ | | .22¾ | |
| 66 Gasoline | .24½ | | .24½ | | .24½ | |
| 68-70 Gasoline | .25 | | .25 | | .25 | |

## NATURAL GASOLINE

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 80-84 compression | .16½ | .17 | .16½ | .17 | .17 | |
| 72-76 absorption | .17 | .17½ | .16½ | .17 | .17½ | |
| **OKLAHOMA (Group 3)—** | | | | | | |
| Grade A, 72-76, under 375 e.p., rec. 90% | .16¾ | .17¼ | .16¼ | .17¼ | .16½ | .17 |
| Grade B, 76-80, 375 end point, rec. 88% | .16¾ | .17¼ | .16¼ | .17¼ | .16½ | .17 |
| Grade C, 80-84, 375 end point, rec. 85% | .16¼ | .17¼ | .16¼ | .17¼ | .16¼ | .16¾ |
| Grade D, 80-84, 350 end point, rec. 80% | .16¼ | .17¼ | .16¼ | .17¼ | .16¼ | .16¾ |
| Grade E, 84-87, 350 end point | .16¼ | .17¼ | .16¼ | .17¼ | .16¼ | .16¾ |
| Grade F, 87-90, 350 end point | .16¼ | .17¼ | .16¼ | .17¼ | .16¼ | .16¾ |
| **NORTH TEXAS—** | | | | | | |
| 80-84 compression | .15½ | .16 | .15½ | .16 | .15½ | .16 |
| 84-90 compression | .15½ | .16 | .15½ | .16 | .15½ | .16 |
| 72-76 absorption | .16½ | .17 | .16½ | .17 | .16¼ | .16¼ |
| **NORTH LOUISIANA-SOUTH ARKANSAS—** | | | | | | |
| 80-88 compression | .17 | | .17½ | | .16¼ | .16¾ |

## BURNING OILS

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 41-43 water white Kerosene | .04¾ | .05¼ | .04½ | .05 | .04 | .04½ |
| 42-43 water white Kerosene | .05¼ | .05½ | .05 | .05¼ | .04½ | .05 |
| **OKLAHOMA (Group 3)—** | | | | | | |
| 41-43 water white Kerosene | .05 | .05¼ | .04½ | .04¾ | .04 | .04¼ |
| 42-43 water white Kerosene | .05¼ | .05½ | .04¾ | .05 | .04¼ | .04½ |
| 42-43 Kerosene Distillate | .05 | .05¼ | .04⅜ | .04¾ | .04¼ | .04½ |
| 44-46 Kerosene Distillate | .05¾ | .06 | .05¾ | .06 | .05¾ | .06 |
| 45-47 Kerosene Distillate (500 end point) | .08½ | .09 | .08½ | .09 | .08½ | .09 |
| 46-48 Kerosene Distillate (480 end point) | .09½ | .10 | .09½ | .10 | .09½ | .10 |
| **NORTH TEXAS—** | | | | | | |
| 41-43 water white Kerosene | .03½ | .04 | .03½ | .04 | .03¼ | .03¾ |
| 41-43 prime white Kerosene | .03¼ | .03¾ | .03¼ | .03¾ | .03 | .03½ |
| 40-42 prime white Distillate | .03 | .03½ | .03 | .03½ | .02¼ | .03¼ |
| **NORTH LOUISIANA-SOUTH ARKANSAS—** | | | | | | |
| 41-43 water white Kerosene | .04¾ | | .04½ | | .04 | |
| **ROCKY MOUNTAIN STATES—** | | | | | | |
| 40-42 prime white Distillate | .08 | | .08 | | .08 | |
| **PENNSYLVANIA—** | | | | | | |
| 43 Kerosene | .06½ | | .06½ | | .06½ | |
| 45 Kerosene | .07 | | .06¼ | | .06¼ | |
| 46 Kerosene | .07¾ | | .07½ | | .07½ | |
| 47 Kerosene | .08¼ | | .08½ | | .08½ | |
| 36 Miners' Neutral | .06¼ | | .06¼ | | .06¼ | |

## LONDON

| | Sept. 5 | Aug. 29 | Aug. 22 |
|---|---|---|---|
| Bunker Fuel Oil, delivered, ton (shillings) | .70 | .70 | .70 |

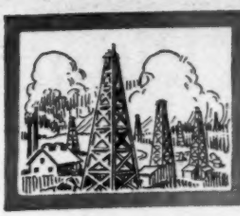
## FUEL OILS

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 24-26 Fuel Oil (sellers' cars, Group 3) | 1.20 | 1.25 | 1.30 | 1.40 | 1.25 | 1.40 |
| 32-35 Gas Oil | .03¼ | .03½ | .03½ | .03¾ | .03 | .03½ |
| **KANSAS (Group 3)—** | | | | | | |
| 24-26 Fuel Oil | 1.25 | 1.30 | 1.25 | 1.30 | 1.35 | 1.40 |
| 32-36 Gas Oil | .03 | .03½ | .03 | .03½ | .03 | .03½ |
| **OKLAHOMA (Group 3)—** | | | | | | |
| 24-26 Fuel Oil (buyers' cars) | 1.00 | 1.10 | 1.00 | 1.10 | 1.20 | 1.30 |
| 24-26 Fuel Oil (sellers' cars) | 1.15 | 1.20 | 1.20 | 1.25 | 1.32½ | 1.37½ |
| 28-30 Fuel Oil (sellers' cars) | 1.30 | 1.35 | 1.30 | 1.35 | 1.37½ | 1.45 |
| 32-36 Gas Oil | .03¼ | .03½ | .03 | .03¼ | .03¼ | .03½ |
| **NORTH TEXAS—** | | | | | | |
| 24-26 Fuel Oil | .95 | 1.05 | .95 | 1.05 | .95 | 1.05 |
| 26-30 Fuel Oil | 1.00 | 1.10 | 1.00 | 1.10 | 1.00 | 1.10 |
| 32-36 Gas Oil | .02¼ | .02¾ | .02¼ | .02¾ | .02½ | .02¾ |
| 36-38 Gas Oil | .02½ | .03 | .02½ | .03 | .02½ | .03 |
| 38-40 Straw Distillate | .02¾ | .03½ | .02¾ | .03¼ | .02¾ | .03¼ |
| **NORTH LOUISIANA-SOUTH ARKANSAS—** | | | | | | |
| 24-26 Fuel Oil | 1.25 | | 1.25 | | 1.45 | 1.60 |
| 32-36 Gas Oil | .04½ | | .04½ | | .05 | |
| **GULF COAST (SOUTH TEXAS)—** | | | | | | |
| Gas Oil | .04 | .05 | .04 | .05 | .03½ | .04½ |
| Gulf Coast Fuel | 1.50 | 1.60 | 1.40 | 1.55 | 1.35 | 1.40 |
| **PENNSYLVANIA—** | | | | | | |
| 36-40 Fuel Oil | .05¾ | | .05¾ | | .05¾ | |
| 30-34 Fuel Oil | .05½ | | .05½ | | .05½ | |
| 34 Neutral | .06½ | | .06½ | | .06½ | |

## NEUTRAL OILS

| OKLAHOMA— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| **Pale Neutrals:** | | | | | | |
| 70-80 vis., 2½ color, 20-25 cold test | .04 | .04½ | .04 | .04½ | .04½ | .04¾ |
| 100 vis., 2 color, 20-25 cold test | .05 | .05½ | .05 | .05½ | .05½ | .05¾ |
| 100 vis., 3 color, 20-25 cold test | .04½ | .05 | .04½ | .05 | .05 | .05¼ |
| 150 vis., 3 color, 20-25 cold test | .08¼ | .08¾ | .08¼ | .08¾ | .08¾ | .09 |
| 150 vis., 4 color, 20-25 cold test | .08¾ | .09 | .08½ | .09 | .08¾ | .09 |
| 180 vis., 4 color, 23-28 cold test | .09¾ | .10¼ | .09¾ | .10¼ | .10¼ | .10½ |
| 180 vis., 3 color, 23-28 cold test | .10½ | .11 | .10½ | .11 | .11 | .11¼ |
| 200 vis., 3 color, 23-28 cold test | .11 | .11½ | .11 | .11½ | .11½ | .12 |
| 200 vis., 4 color, 23-28 cold test | .09¾ | .10¼ | .09¾ | .10¼ | .10¼ | .11 |
| 220 vis., 3 color, 25-30 cold test | .12 | .12½ | .12 | .12½ | .12½ | .13 |
| 220 vis., 4 color, 25-30 cold test | .11¼ | .11¾ | .11¼ | .11¾ | .11¾ | .12 |
| 240 vis., 4 color, 25-30 cold test | .12¼ | .12¾ | .12¼ | .12¾ | .12¾ | .13 |
| 280 vis., 3 color, 25-30 cold test | .15½ | .16 | .15½ | .16 | .16 | .16¼ |
| 280 vis., 4 color, 25-30 cold test | .14½ | .15 | .14½ | .15 | .15 | .15½ |
| 300 vis., 3 color, 25-30 cold test | .16½ | .17 | .16½ | .17 | .17 | .17½ |
| **Red Neutrals:** | | | | | | |
| 180 vis., 5 color, 23-28 cold test | .09 | .09½ | .09 | .09½ | .09½ | .10 |
| 180 vis., 6 color, 23-28 cold test | .08¼ | .08¾ | .08¼ | .08¾ | .08¼ | .09 |
| 200 vis., 5 color, 23-28 cold test | .09½ | .10 | .09½ | .10 | .10 | .10½ |
| 200 vis., 6 color, 23-28 cold test | .08¾ | .09¼ | .08¾ | .09¼ | .09¼ | .09½ |
| 220 vis., 5 color, 25-30 cold test | .10½ | .11 | .10½ | .11 | .11 | .11½ |
| 220 vis., 6 color, 25-30 cold test | .09¾ | .10¼ | .09¾ | .10¼ | .10¼ | .10½ |
| 240 vis., 5 color, 25-30 cold test | .11½ | .12 | .11½ | .12 | .12 | .12½ |
| 240 vis., 6 color, 25-30 cold test | .10¾ | .11¼ | .10¾ | .11¼ | .11¼ | .12 |
| 280 vis., 5 color, 25-30 cold test | .13½ | .14 | .13½ | .14 | .14 | .14½ |
| 280 vis., 6 color, 25-30 cold test | .12½ | .13 | .12½ | .13 | .13 | .13½ |
| 300 vis., 5 color, 25-30 cold test | .16 | .16½ | .16 | .16½ | .16 | .16½ |
| 150-160 vis., 1 color, 40-50 cold test | .06 | .06¼ | .06¼ | .06¾ | .06¾ | .07 |
| 190-200 dark green, 40-50 cold test | .05 | .05½ | .05 | .05½ | .05½ | .06 |
| 600 steam refined | .16 | .17 | .16 | .17 | .16 | .17 |
| 590-600 Bright Stock | .29 | .31 | .29 | .31 | .29 | .31 |
| **Waxes:** | | | | | | |
| 124-126 White Crude Scale Wax | .02 | .02⅛ | .02 | .02⅛ | .02 | .02⅛ |
| **PENNSYLVANIA—** | | | | | | |
| 150, 3 color | .20 | | .20 | | .20 | |
| 180, 3 color | .22¼ | | .22½ | | .22¼ | |
| 200, 3 color | .24¼ | | .24¼ | | .24½ | |
| 220, 3 color | .27 | | .27½ | | .27½ | |
| 600, steam refined | .10 | | .10¼ | | .10½ | |
| 635, steam refined | .13¾ | | .14 | | .14 | |
| 650, steam refined | .15 | | .15 | | .15½ | |
| 600, Pennsylvania flash | .19 | | .20 | | .20 | |
| 630, Pennsylvania flash | .23½ | | .24 | | .24 | |
| *550, E filtered | .16 | | .16½ | | .16½ | |
| *600, E filtered | .18 | | .18½ | | .19 | |
| 600 E filtered | .14½ | | .16 | | .16 | |
| 600, D filtered | .24 | | .24 | | .24 | |
| 550, E filtered | .14 | | .14 | | .14 | |
| 550, D filtered | .19½ | | .19½ | | .19½ | |
| Pennsylvania Bright Stock | .37 | | .37 | | .37 | |
| Summer Black Oil | .07 | | .07 | | .07 | |
| †122-124 White Crude Scale Wax | .02½ | | .02½ | | .02½ | |
| †124-126 White Crude Scale Wax | .02¾ | | .02¾ | | .02¾ | |

*At Warren, Ohio. †At New York City.



# REFINERY AND CRUDE PRICES

**Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields**

| GULF COAST (SOUTH TEXAS)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| Lubricating Stocks: | | | | | | |
| Zero Black | .05 | .06 | .05 | .06 | .05 | .06 |
| No. 2 color, 100 vis., pale oil | .06 | .07 | .06 | .07 | .05½ | .06½ |
| No. 2½ color, 150 vis., pale oil | .09¾ | .11 | .09¾ | .11 | .10 | .11 |
| No. 3 color, 200 vis., pale oil | .11½ | .13 | .11½ | .13 | .11½ | .12½ |
| No. 3½ color, 300 vis., pale oil | .15½ | .17 | .14½ | .15½ | .15½ | 16½ |
| No. 3¾ color, 500 vis., pale oil | .18½ | .21 | .18½ | .21 | .18½ | .20½ |
| No. 4 color, 750 vis., pale oil | .28½ | .30 | .28½ | .30 | .29 | .30 |
| No. 1½ color, 100 vis., pale, filtered | .16½ | .17½ | .16½ | .17½ | .16½ | .17½ |
| No. 1½ color, 150 vis., pale, filtered | .18½ | .22½ | .18½ | .22½ | .18½ | .22½ |
| No. 2 color, 200 vis., pale, filtered | .24½ | .26 | .24½ | .25½ | .24½ | .25½ |
| No. 2 color, 300 vis., pale, filtered | .26½ | .27 | .26½ | .27 | .26½ | .27 |
| No. 2½ color, 500 vis., pale, filtered | .28½ | .31 | .28½ | .30 | .28½ | .30 |
| No. 2½ color, 750 vis., pale, filtered | .39½ | .42 | .39½ | .42 | .39½ | .42 |
| No. 5 color, 200 vis., red oil | .10½ | .12 | .10 | .11½ | .10 | .11½ |
| No. 5 color, 300 vis., red oil | .13½ | .14½ | .13½ | .14½ | .13½ | .14½ |
| No. 6 color, 500 vis., red oil | .16½ | .17½ | .16½ | .17½ | .16½ | .17½ |
| No. 5 color, 750 vis., red oil | .26 | .27½ | .26 | .27½ | .26 | .27½ |

## MOTOR NATURAL GASOLINE (BLENDS)

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 60-62 450 end point | .13½ | .14 | .13½ | .14 | .13 | .13½ |
| 64-66 450 end point | .13½ | .14 | .13½ | .14 | .13 | .13½ |
| OKLAHOMA (Group 3)— | | | | | | |
| 68-70 430-435 end point | .13¼ | .13½ | .13¾ | .14 | .13½ | .13¾ |
| 64-66 450 end point | .13¼ | .13½ | .13¾ | .14 | .13½ | .13¾ |
| 60-62 450 end point | .13¼ | .13½ | .13¾ | .14 | .13¼ | .13½ |
| 58-60 440-450 end point | .13¼ | .13½ | .13¾ | .14 | .13½ | .13¾ |
| NORTH TEXAS— | | | | | | |
| 58-62 440 end point | .12¼ | .12¾ | .12¼ | .12¾ | .12½ | .13 |
| 58-62 450 end point | .12¼ | .12¾ | .12 | .12½ | .12¼ | .12¾ |
| PENNSYLVANIA— | | | | | | |
| *60-62 | .18½ | | .18½ | | .18½ | |
| *64-66 | .19 | | .19 | | .19 | |
| *66-68 | .19¼ | | .19¼ | | .19½ | |
| *68-70 | .19½ | | .19½ | | .19½ | |

*At Sistersville, W. Va.

## ROAD OILS

| CHICAGO DISTRICT (Based on Gr. 3)— | Sept. 5 | | Aug. 29 | | Aug. 22 | |
|---|---|---|---|---|---|---|
| 50-60 Asphaltic content (Group 3) | 1.50 | | 1.30 | 1.40 | 1.25 | 1.30 |
| 50-60 Asphaltic content (delivered) | .05¼ | .05¾ | .05¼ | .05¾ | .05¼ | .05¾ |
| OKLAHOMA (Group 3)— | | | | | | |
| 40-60 Asphaltic content | 1.30 | 1.35 | 1.30 | 1.35 | 1.30 | 1.35 |
| 60-70 Asphaltic content | 1.35 | 1.40 | 1.35 | 1.40 | 1.35 | 1.40 |

## NEW YORK DOMESTIC MARKET

| | Sept. 5 (gal.) | Aug. 29 (gal.) | Aug. 22 (gal.) |
|---|---|---|---|
| Motor Gasoline: | | | |
| Greater New York, in steel barrels | .25 | .25 | .25 |
| New York State (outside Greater New York) and New England, tank wagon | .25 | .25 | .25 |
| Bulk delivered at New York | .19 | .19 | .19 |
| New Jersey, tank wagon | .24 | .24 | .24 |
| V.M.P. Naphtha, in steel barrels | .24 | .24 | .24 |
| Kerosene: | | | |
| Greater New York, tank wagon | .13 | .13 | .13 |
| New York State (outside Greater New York) and New England, tank wagon | .14 | .14 | .14 |
| Bulk, delivered at New York | .08 | .08 | .08 |
| New Jersey, tank wagon | .11 | .11 | .11 |
| Lubricating Oil (industrial) at refinery, Bayonne, N. J.: | | | |
| Cylinder, light filtered, in barrels | .38 | .38 | .38 |
| Cylinder dark filtered, in barrels | .33 | .33 | .33 |
| Cylinder, Bright Stock | .46 | .46 | .46 |
| Cylinder, steam refined (600) | .22½ | .22½ | .22½ |
| Black, in bulk | .10 | .10 | .10 |
| Bloomless, white, 30-31 gravity, 170 vis. | .43 | .43 | 43 |
| Bloomless, 885 specific gravity | .18 | .18 | .18 |
| Red Paraffin: | | | |
| 170 vis. | .20 | .20 | .20 |
| 212 vis. | .22 | .22 | .22 |
| 265 vis. | .24 | .24 | .24 |
| 295 vis. | .27 | .27 | .27 |
| Paraffin, 903 specific gravity | .25 | .25 | .25 |
| Spindle, 200 vis. at 100 | .27 | .27 | .27 |
| Lubricating Oil (motor), discount to dealers: | | | |
| Cylinder, in barrels | 1.00 | 1.00 | 1.00 |
| Steam tractors, in barrels | 1.00 | 1.00 | 1.00 |
| Transmission and differential, in barrels | .09½ | .09½ | .09½ |
| Motor Grease, in barrels, pound | .13 | .13 | .13 |
| *Fuel Oil: | | | |
| Bunker Oil, 14 plus, delivered in barges, bbl. | 1.45 | 1.45 | 1.45 |
| Diesel Fuel, 26 plus, at refinery, gallon | .04 | .04 | .04 |
| Gas Oil, delivered in New York | .05 | .05 | .05 |
| Wax, fully refined: | | | |
| 120-122 a.m.p. | .03½ | .03⅛ | .03⅛ |
| 125-127 a.m.p. | .03½ | .03½ | .03½ |
| 130-132 a.m.p. | .04 | .04 | .04 |
| 135-137 a.m.p. | .05 | .05 | .05 |

*Lighterage, 6.5 cents a barrel extra.

## NEW YORK EXPORT PRICES

| | Sept. 5 | Aug. 29 | Aug. 22 |
|---|---|---|---|
| Motor Gasoline, in cases, gallon | .31¼ | .31¼ | .31¼ |
| Motor Gasoline, U. S. Navy, spec., gallon | .18 | .18 | .18 |
| Naphtha, 60° F., 59-61 spec. grav. | .20½ | .20½ | .20½ |
| Naphtha, 60° F., spec. grav. | .23½ | .23½ | .23½ |
| Naphtha, 60° F., 66-68 spec. grav. | .24½ | .24½ | .24½ |
| Kerosene: | | | |
| Standard white, in bulk, gallon | .05½ | .05½ | .05½ |
| Standard white, in barrels, gallon | .11½ | .11½ | .11½ |
| Standard white, in cases, gallon | .15 | .15 | .15 |
| Water white, in bulk, gallon | .06½ | .06½ | .06½ |
| Water white, in barrels, gallon | .12½ | .12½ | .12½ |
| Water white, in cases, gallon | .16 | .16 | .16 |

## MEXICAN CRUDE OIL

| Mexican Ports, f.o.b. terminals (based on contracts): | Sept. 5 | Aug. 29 | Aug. 22 |
|---|---|---|---|
| *Tuxpam Crude Oil, barrel | 1.45 | 1.50 | 1.50 |
| †Panuco Crude Oil, barrel | .90 | .95 | .95 |

*Plus .2559 cents tax. †Plus .1510 cents tax.

| | | | |
|---|---|---|---|
| Tuxpam Crude Oil, barrel | 2.06 | 2.08 | 2.08 |
| Panuco Crude Oil, barrel | 1.40 | 1.44 | 1.44 |

*Based on cost.

## CRUDE OIL PRICES

**July 20.**—Corning reduced to $1.75. Ohio Oil Co. reduced Lima, Indiana, Wooster, Plymouth, Illinois, Princeton and Waterloo 25c. The Texas Co. posted price of $1.75 for North Texas, $1.25 for Mexia, and $1.50 for Currie crude of 40 degrees gravity and above, a reduction of 25c. The Texas Co. posted price of $1.75 in Lyons-Quinn Pool and 85c for Healdton, a premium of 10c. Same day The Texas Co. reduced price of Healdton, meeting other posted prices. Canadian crude reduced 25c by Imperial Oil (Ltd.)

**July 21.**—The Magnolia Co. reduced Mexia crude to $1.25 at well, meeting The Texas Co. Price.

**July 25.**—Standard Oil Co., of California, announces reduction of 25c on all grades of crude.

**August 2.**—Prairie Oil & Gas Co. reduced Oklahoma, Kansas and North Texas crude 25c. Sinclair Oil Co., Gypsy Oil Co., and The Texas Co. met price.

**August 3.**—Standard Oil Co. of Louisiana reduced all grades of north Louisiana and south Arkansas crude, 25c with the exception of heavy Caddo and Bellevue.

**August 4.**—Magnolia Petroleum Co. reduced Kansas-Oklahoma crude to $1.25, north Texas, $1.50, and Cement, Okla., 85c. All grades of Wyoming crude reduced 20 cents.

**August 25.**—Standard Oil Co. of Louisiana changed gravities of Homer, Haynesville and El Dorado (Ark.) crudes on which prices are based.

| Oklahoma and Kansas | |
|---|---|
| All grades (excepting Healdton) | $1.25 |
| Duncan-Comanche | 1.25 |
| Healdton | .75 |
| Hewitt | 1.25 |
| Cement | .85 |
| Walters | .75 |
| **Northern Louisiana** | |
| Caddo, 38° and above | $1.25 |
| Caddo, 32° to 37.9° | 1.15 |
| Caddo, 32° to 34.9° | 1.10 |
| Caddo, heavy | .75 |
| Homer, 35° and above | 1.25 |
| Homer, 33° to 34.9° | 1.15 |
| Homer, 31° to 32.9° | 1.10 |
| Homer, below 31° | .75 |
| Bull Bayou, 38° and above | 1.15 |
| Bull Bayou, 35° to 37.9° | 1.05 |
| Bull Bayou, 32° to 34.9° | 1.00 |
| Crichton Crude | 1.00 |
| De Soto Crude | 1.25 |
| El Dorado (Ark.), 33° and above | 1.25 |
| El Dorado (Ark.), below 33° | 1.00 |
| Haynesville, 33° and above | 1.10 |
| Haynesville, below 33° | 1.00 |
| Bellevue | .75 |
| **North Texas and Panhandle** | |
| Electra | $1.50 |
| Henrietta | 1.50 |
| Moran | 1.50 |
| Thrall | 1.50 |
| Burkburnett | 1.50 |
| Stephens County | 1.50 |
| Corsicana, light | 1.00 |
| Corsicana, heavy | .65 |
| Strawn | 1.50 |
| Ranger | 1.50 |
| Desdemona | 1.50 |
| Mexia | 1.25 |
| Currie | 1.50 |
| **Gulf Coast** | |
| Sour Lake | $1.25 |
| Humble | 1.25 |
| Markham | 1.25 |
| Goose Creek | 1.25 |
| Vinton | 1.25 |
| West Columbia | 1.25 |
| Orange | 1.25 |
| Jennings | 1.25 |
| Spindletop | 1.25 |
| Pierce Junction "A" | 1.25 |
| Pierce Junction "B" | .80 |
| Hull "A" | 1.25 |
| Hull "B" | .80 |
| **Wyoming Crude Oil Market** | |
| Rock Creek, Wyo. | $ .80 |
| Salt Creek | .70 |
| Big Muddy | .70 |
| Mule Creek | .60 |
| Grass Creek | 1.20 |
| Elk Basin | 1.20 |
| Lance Creek | 1.20 |
| Osage | 1.20 |
| Cat Creek, Mont. | 1.20 |
| Lander | 17½ |
| **California Quotations** | |
| 14° to and including 19.9° | $ .60 |
| 20° to and including 20.9° | .63 |
| 21° to and including 21.9° | .67 |
| 22° to and including 22.9° | .73 |
| 23° to and including 23.9° | .80 |
| 24° to and including 24.9° | .88 |
| 25° to and including 25.9° | .96 |
| 26° to and including 26.9° | 1.05 |

For each full degree above 26°, to and including 34.9°, 10 cents additional will be paid.

| | |
|---|---|
| 35° and above | $1.95 |
| **Eastern States** | |
| Pennsylvania | $3.00 |
| Cabell | 1.86 |
| Corning | 1.75 |
| Lima | 1.98 |
| Wooster | 2.10 |
| Ragland | 1.00 |
| Illinois | 1.77 |
| Indiana | 1.78 |
| Princeton | 1.77 |
| Plymouth | 1.15 |
| Somerset | 1.85 |
| Somerset, above 38° | 1.90 |
| Western Kentucky | 1.65 |
| Waterloo | 1.25 |
| *Petrolia, Canada | 2.38 |
| *Oil Springs, Canada | 2.45 |

*Plus Government bounty of 52½c.

# Big Crude Shipments to Eastern Plants

## Record Amount Sent From Mid-Continent by Prairie Pipe Line Co. Variously Interpreted. French Specifications Require High Grade Gasoline

By J. B. GAMBRELL

Other than a general softening of prices, with the exception of kerosene, which has shown further strength, there has been very little material change in the Mid-Continent refined oil market. About the most interesting phase of the entire situation is the way in which the crude angle is developing.

The Prairie Pipe Line Co.'s monthly statement for the August period showed gross deliveries of 5,484,538.21 bbls., an average of 176,920 bbls. per day. These figures in comparison with July's when total shipments amounted to 4,388,515 bbls., or 141,565 bbls. daily, show a gross increase of 1,095,993 bbls., or a daily jump of 35,355 bbls. in deliveries to refineries. This represents the highest delivery mark of this company during the past two years, and while the Prairie has made it a policy never to give out its complete purchases and tenders, conceding that the July level was maintained, the August figures indicate that this company is now actually pulling on storage.

While naturally such a condition has created a fund of speculation as to the trend of Mid-Continent crude, interpretation of its significance is not as simple a proposition as it would seem. Ordinarily the fact that the Prairie, dominant crude factor and price maker, was pulling on stocks or had at least restored the balance between its purchases and deliveries, could be construed as indicative of an advance in the Mid-Continent price structure in the near future.

In the present situation, however, there are many angles which necessarily must be taken into consideration before a true perspective may be obtained. In the first place, the large August shipments of the Prairie are subject to two constructions—it may mean that the eastern refineries for which this company serves as purchaser and carrier, are at last turning to the Mid-Continent Field for crude to replace the Mexican oil cut off by the salt water invasion of Mexico's light oil field. If this is the case, the Prairie's August record is of far reaching significance and consequence, as such a condition undoubtedly would mean a ready market for the current Mid-Continent production.

### Fuel Oil Demand a Factor

On the other hand, their August shipments may be attributed entirely (and probably are) to the heavy industrial demand for fuel oil. If this is the proper construction or interpretation, it will have no effect on the general situation as deliveries can be expected to drop once the railroad situation is clarified and mining of coal is resumed on a normal scale.

A close analysis of the domestic crude oil situation would indicate that the latter construction was the proper one. There is no change in the statistical position of the industry in so far as the whole country is concerned. In the Mid-Continent Field production has shown no appreciable decline, the daily average hovering around the 850,000-bbl. mark. Other territories east of the Rocky Mountains are practically unchanged. In California, July figures show stocks held by California producers and marketing agencies increased 1,725,000 bbls. over June's total, the Independent Agency's figures being 42,320,000 bbls., and the Standard, due to a different method of computation, totaling 45,187,910 bbls. An average between the two figures show an increase of 900,000 bbls., or, roughly, 17,000 bbls. per day. The daily production for this period was the highest in the history of the State, 374,000 bbls. This territory is looking for another reduction in the price of crude, as it is forecasted that August figures will show an even greater production.

Reverting to the Mid-Continent Field alone, there is another angle which tends to neutralize or offset the optimistic aspect of the Prairie's heavy deliveries, that is, the amount of crude that the Sinclair Crude Oil Purchasing Co. is still putting into storage. This company, which, with the Prairie, has been carrying the crude purchasing burden of the Mid-Continent Field, is still tanking a large quantity of crude. Its August statement showed runs of 2,593,434 68 bbls., as against deliveries of 1,251,474.34 bbls. This shows a daily average of purchase of 83,659 bbls., in comparison with daily deliveries of 40,370 bbls., indicating that 43,289 bbls. a day, or 1,341,960 bbls. for the month, went to storage.

### Change Method of Handling

In reality, what apparently is taking place in the Mid-Continent crude oil situation, according to close students of conditions, is not any fundamental change in production, but a redistribution or disposition of crude. There is still a serious over production of oil, but since the reduction in price to $1.25 there has developed a marked change in the method of handling crude. First, many of the independent producers and companies have inaugurated a storage campaign of their own which is withdrawing from the major pipe lines considerable oil; second, a number of the comparatively large pipe line companies or purchasing agencies, such as The Texas Co., Gulf, Empire, Cosden, etc., which are known to be in need of oil, have become extremely active since the prevailing low price and as a result are getting a larger share of the new production than under normal conditions. Such circumstances, in the opinion of well posted men, may prove misleading to anyone making a casual analysis. It has been the history of the industry that invariably during periods of depression the smaller purchasing agencies take advantage of the fact that the big pipe line companies have all the oil they need and get extremely busy, and it is not until their activities reach such a proportion as to become troublesome that the dominant agencies make any effort to retaliate. In the present situation, it is felt that the Prairie and Sinclair with their heavy stocks of crude are perfectly willing for the other pipe lines to take on more of the burden.

While this is the condition now, it is, of course, impossible to forecast just how long it will obtain. If the independent producers' movement to restrict drilling and build their own storage, and incidentally scouts report that there is a large amount of storage being built by the independents, is supported whole heartedly, its effect is bound to be felt within 60 or 90 days. Obviously, if production declines to any extent the major pipe line organizations, whose customers may be forced to turn to this territory for future crude requirements, cannot afford to let such a condition go too far. Executives, though, of the larger companies in this territory, do not believe that there is any hope of the creation of a healthy situation until there is at least a drop of 100,000 bbls. in the daily production of the Mid-Continent.

With these conditions in mind, leaders of the industry in this territory declare that there is nothing in the situation to justify the hope of the advance in crude in the immediate future, and frankly hope that the price will remain stationary until such time as the proper equilibrium between production and consumption is reached. They point out in this connection that the effect of prematurely advancing crude prices is too fresh in the minds of the industry for them to make a similar mistake, citing in substantiation of this the tremendous drilling campaign and production called forth by the advance to $2 of Mid-Continent crude last November.

There is very little change in the domestic gasoline demand. Sales managers on the whole were rather disappointed in the volume of orders they found on their desks after the week-end and Labor Day holiday. Expectations of some that there would be a revival of buying after a comparatively light business during the latter part of last week, failed to materialize, and the result has been that practically all grades of gasoline with the exception of the higher gravities, are a little bit weaker.

In respect to the latter, the future export trade outlook from all indications or signs points to the necessity of Mid-Continent refiners cutting a lower end point product, particularly in the 64-66 grade, if they expect to participate in European business. According to authentic advice received by the writer, the various customers in Europe of the exporting organizations which ordinarily purchase in this territory, are demanding a higher quality product to meet the competition of the European marketing agencies, such as the Shell, Anglo-Persian, British Petroleum, Anglo-American, etc. According to this information, the French Government has published specifications covering the various grades of gasoline retailed in France. These specifications, which are carried below for the information of refiners, demand for the Tourisme, the grade exported from the Mid-Continent Field, 95 per cent over at 302 degrees Fahrenheit. This distillation test is taken on the Luynes Bordas machine, which uses 500 cubic centimeters rather than 100, as in the case of the American method. It is understood that the 64 gravity marketed by the Anglo-American, Anglo-Persian, Royal Dutch, etc., have no trouble in meeting this specification, as, for example, the following grades of gasoline were selected from garages in England:

| | Gravity | Initial | Over 212 | End Point | Recovery |
|---|---|---|---|---|---|
| From U. S.... | 64.7 | 115 | 46% | 360 | 99 |
| Shell No. 1.... | 65.4 | 131 | 26½ | 361 | 99 |
| British Pet. Co. | 63.1 | 118 | 48 | 349 | 99 |
| Pratt No 1 ... | 62.9 | 129 | 30½ | 374 | 99 |

The official French specifications promulgated are:

**FRENCH SPECIFICATIONS—GASOLINE**

| | Essence Aviation Cen. | Fht. | Extra Cen. | Fht. | Tourisme Cen. | Fht. | Poids Lourds Cen. | Fht. |
|---|---|---|---|---|---|---|---|---|
| | Moyenne | | | | | | | |
| Start before | 60 | 140 | 60 | 140 | 60 | 140 | 65 | 149 |
| 5% distilling before | 75 | 167 | 60 | 140 | 75 | 167 | | |
| 20% distilling before | | | | | | | 110 | 230 |
| 45% distilling before | | | | | | | 135 | 275 |
| 55% distilling before | 105 | 221 | 95 | 203 | 115 | 239 | | |
| 95% distilling before | 145 | 293 | 125 | 257 | 150 | 302 | 210 | 410 |
| Specific Baume— | | | | | | | | |
| Gravity of residue | 775 | 51 | 760 | 54.5 | 780 | 49.2 | 810 | 34.2 |
| Gravity average at 15° Centigrade | 728 | 63 | 728 | 63 | 728 | 63 | 742 | 59 |

What makes it necessary for Mid-Continent refiners to cut a better quality 60-62 and 64-66 product is the fact that the type of crude utilized for manufacturing the European grades of material by the Standard and Anglo-Persian makes it particularly adaptable to making a quality product. A large quantity of the Standard's export gasoline is being filled by the 2,000,000-bbl. order that the Standard of New Jersey has with the Mid-West Refining Co. through its parent organization, the Standard of Indiana. The Wyoming oil is an extremely high gasoline content crude, which makes the cutting of a 64-gravity gasoline an attractive and profitable business. The same conditions obtain very much in the case of the Anglo-Persian. It is understood that the Persian crude, from which its European gasoline is manufactured, shows a gasoline content of as high as 55 per cent, consequently, independent exporters do not believe that there is much likelihood of a lowering in European standards, as such companies would in all probability oppose rather than favor such a reduction. However, some of the exporting organizations buying in this territory anticipate that there may be some modification of these specifications once conditions turn to a sellers' market. In the meantime, they declare that they must have the co-operation of western refiners if they are to maintain their European trade relationship.

### Natural Gasoline and Blends

Natural gasoline appears to be in somewhat the same position as last week with no change in prices. Blends are moving slowly with a weakening tendency in prices, business apparently being confined to regular customers.

### Burning Oils

The Group 3 kerosene market is showing a further domestic strength. With an active domestic demand refiners in this territory were unable to see any of the Union Petroleum Co.'s export orders. Most of the large refiners in this territory have subsidiaries furnishing an outlet for practically all of their output, so are not worrying much.

A number of sales managers report a heavy demand for white and straw distillate. This demand is coming largely from the middle west with Kansas City the center. Several plants are making a 37-40 or a 38-40 product which they are contracting for considerably under what the spot market is. These concerns, however, believe with the increase in domestic use and more equipment installations, they can prevail upon customers to pay better prices and take a low gravity product.

### Neutrals and Wax

Inability of refiners to get sufficient filtering material, due to poor transportation facilities, is tending to make the light color or pale neutrals scarcer every day, and prices are firm.

There is no change in the price of wax, but exporters report that the foreign demand is somewhat lighter than usual.

### Fuel Oil

Many refiners see in the increased installation of cracking processes an era when the big public utilities which rely on this product for the manufacture of their artificial gas are going to be decidedly up against it for their supply. The successful processes now in operation are able to get 40-45 per cent gasoline and about 15 per cent kerosene out

(Continued on Page 62.)

# *A New*
# money saving pump valve

FORMICA pump valves last four or five times as long as any other type of pump valve with which you are familiar.

The saving in shut-downs, in time, and in labor accomplished by eliminating five pump valve replacements out of six is no mean item in the course of a year's time.

It is so great that the possibility of such a saving has brought us trial orders from pump users everywhere—and the trial orders have been followed by regular orders for valves in quantity.

Formica is a laminated material with a strong fabric base. It never splits or chips and never drops off parts that clog the line or the traps.

It is not affected by hot or cold, water, oil, gasoline, alcohol or any of the usual solvents.

*If you have not yet tried Formica valves, the only thing to do is to send a trial order. Get our prices and literature on the full line.*

THE FORMICA INSULATION COMPANY
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FORMICA
A Laminated Phenolic Condensation Product
SHEETS TUBES RODS

# TANK WAGON MARKETS

**Tank wagon quotation for gasoline and kerosene in the United States, as furnished by the larger marketing concerns, Sept. 5**

### STANDARD OIL CO. (INDIANA)

**Main Service Station Price**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Chicago district | 21.0 | 23.0 | 11.5 |
| Decatur, Ill. | 21.8 | 23.8 | 12.0 |
| Joliet | 21.0 | 23.0 | 12.3 |
| Peoria | 21.8 | 23.8 | 12.0 |
| Quincy | 21.6 | 23.6 | 11.9 |
| Davenport, Iowa | 22.1 | 24.1 | 12.4 |
| Des Moines | 22.1 | 24.1 | 12.4 |
| Keokuk | 22.1 | 24.1 | 12.4 |
| Sioux City | 21.7 | 23.7 | 12.0 |
| Duluth, Minn. | 22.8 | 24.8 | 13.1 |
| Minneapolis | 22.5 | 24.5 | 13.1 |
| La Crosse, Wis. | 22.8 | 24.8 | 12.9 |
| Milwaukee | 21.6 | 23.6 | 11.6 |
| Madison | 21.9 | 23.9 | 12.0 |
| Detroit, Mich. | 22.4 | 24.4 | 12.7 |
| Grand Rapids | 22.3 | 24.3 | 12.6 |
| Saginaw | 22.5 | 24.5 | 12.8 |
| Evansville, Ind. | 21.6 | 23.6 | 12.0 |
| Fort Wayne | 22.0 | 24.0 | 12.4 |
| Indianapolis | 21.8 | 23.8 | 12.2 |
| South Bend | 22.0 | 24.0 | 12.4 |
| Fargo, N. D. | 25.5 | 27.5 | 14.7 |
| Huron, S. D. | 24.6 | 26.6 | 13.6 |
| Sioux Falls | 24.1 | 26.1 | 13.1 |
| Kansas City, Mo. | 20.5 | 22.5 | 10.5 |
| Springfield | 21.4 | 23.4 | 11.7 |
| St. Louis | 21.2 | 23.5 | 11.5 |
| St. Joseph | 21.9 | 23.9 | 11.7 |
| Kansas City, Kans. | 20.5 | 22.5 | 10.8 |
| Wichita | 21.4 | 23.4 | 11.3 |
| Bartlesville, Okla. | 20.5 | 22.5 | 10.4 |

### SOUTHWESTERN DISTRICT

**Magnolia Petroleum Co.**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Dallas, Tex. | 20.0 | 23.0 | 12.0 |
| Fort Worth | 20.0 | 23.0 | 10.0 |
| Houston | 20.0 | 23.0 | 12.0 |
| Galveston | 20.0 | 23.0 | 12.0 |
| San Antonio | 20.0 | 23.0 | 12.0 |
| Amarillo | 21.0 | 24.0 | 13.0 |
| El Paso | 21.0 | 24.0 | 13.0 |
| Com. Texas points | 20.0 | 23.0 | 12.0 |
| Diff. Terr., Tex. | 21.0 | 24.0 | 13.0 |
| Muskogee, Okla. | 20.0 | 23.0 | 10.0 |
| Oklahoma City | 20.0 | 23.0 | 9.0 |
| Tulsa | 20.0 | 23.0 | 10.0 |
| *Fort Smith, Ark. | 21.0 | 24.0 | 11.0 |
| *Little Rock | 21.0 | 23.0 | 12.0 |
| *Pine Bluff | 21.0 | 24.0 | 12.0 |
| *Texarkana | 21.0 | 23.0 | 12.0 |

*Includes Arkansas State tax of 1c.

### SOUTHEASTERN TERRITORY

**Standard Oil Co., Kentucky**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Atlanta, Ga. | 24.0 | 26.0 | 14.0 |
| Augusta | 24.0 | 26.0 | 14.0 |
| Macon | 24.0 | 26.0 | 14.0 |
| Savannah | 22.0 | 24.0 | 12.0 |
| Birmingham, Ala. | 22.0 | 24.0 | 13.0 |
| Mobile | 21.0 | 23.0 | 12.5 |
| Montgomery | 22.0 | 24.0 | 14.0 |
| Clarksdale, Miss. | 22.5 | 24.5 | 11.5 |
| Jackson | 22.0 | 24.0 | 10.0 |
| Natchez | 22.0 | 24.0 | 11.0 |
| Vicksburg | 22.0 | 24.0 | 11.0 |
| Jacksonville, Fla. | 22.0 | 24.0 | 12.0 |
| Miami | 25.0 | 27.0 | 14.5 |
| Pensacola | 22.0 | 24.0 | 12.5 |
| Tampa | 22.0 | 24.0 | 12.0 |
| Covington, Ky. | 21.0 | 24.0 | 12.5 |
| Lexington | 23.0 | 25.0 | 12.0 |
| Louisville | 22.0 | 24.0 | 11.0 |

### CHICAGO TANK WAGON

**(Chicago Territory)**

| | |
|---|---|
| Gasoline | 21.0 |
| Kerosene | 11.5 |

Tank wagon prices on Jan. 25, 1921, down 2c on g., 3c on k.; Feb. 1, both down 2c; April 26, both down 3c; July 25, g. down 2c; Oct. 15, g. up 1c; Oct. 23, k. up 1c; Nov. 9, g. up 1½c., k. 1c; Apr. 10, g. up 1½c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c, k. down 1c.

### ATLANTIC TERRITORY

**Atlantic Refining Co.**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Pittsburgh, Pa. | 23.0 | 26.0 | 13.0 |
| Philadelphia | 23.0 | 26.0 | 13.0 |
| Dover, Del. | 23.0 | 26.0 | 13.0 |
| Wilmington | 23.0 | 26.0 | 13.0 |
| Providence, R. I. | 25.0 | 28.0 | 11.5 |
| Springfield, Mass. | 25.0 | 27.0 | 14.0 |
| Worchester | 25.0 | 28.0 | 12.0 |
| Hartford, Conn. | 25.0 | 28.0 | 14.0 |
| New Haven | 25.0 | 27.0 | 13.0 |
| Boston | 25.0 | 27.0 | 13.0 |

### ATLANTIC COAST ZONE

**Standard Oil Co., New Jersey**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Atlantic City, N. Y. | 24.0 | 26.0 | 11.5 |
| Newark | 24.0 | 26.0 | 11.5 |
| Annapolis, Md. | 25.0 | 27.0 | 11.5 |
| Baltimore | 24.0 | 26.0 | 10.5 |
| Washington, D. C. | 23.5 | 25.5 | 11.0 |
| Norfolk, Va. | 23.0 | 25.0 | 11.5 |
| Petersburg | 25.0 | 27.0 | 12.5 |
| Danville | 25.0 | 27.0 | 13.5 |
| Richmond | 24.0 | 26.0 | 11.5 |
| Roanoke | 25.5 | 27.5 | 13.0 |
| Charleston, W. Va. | 240. | 26.0 | 12.0 |
| Keyser | 24.5 | 26.5 | 12.5 |
| Parkersburg | 22.5 | 24.5 | 10.5 |
| Wheeling | 22.5 | 25.5 | 12.0 |
| Charlotte, N. C. | 24.5 | 26.5 | 13.0 |
| Hickory | 25.0 | 27.0 | 13.5 |
| Mt. Airy | 25.0 | 27.0 | 13.5 |
| Salisbury | 25.0 | 27.0 | 13.5 |
| Charleston, S. C. | 23.5 | 25.5 | 10.5 |
| Columbia | 25.5 | 27.5 | 12.5 |

### NEW ENGLAND REGION

**Standard Oil Co., New York**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Albany, N. Y. | 25.0 | 28.0 | 14.0 |
| *New York | 25.0 | 28.0 | 13.0 |
| Buffalo | 25.0 | 28.0 | 14.0 |
| Boston, Mass. | 25.0 | 28.0 | 14.0 |
| Providence, R. I. | 25.0 | 28.0 | 14.0 |
| Augusta, Me. | 25.0 | 28.0 | 14.0 |
| Manchester, N. H. | 25.0 | 28.0 | 14.0 |
| Burlington, Vt. | 25.0 | 28.0 | 14.0 |

*Price in steel barrels.

### ROCKY MOUNTAIN REGION

**Continental Oil Co.**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Denver, Colo. | 23.0 | 25.0 | 14.5 |
| Glenwood Springs | 28.0 | .... | 19.5 |
| Pueblo | 23.0 | 25.0 | 14.5 |
| Basin, Wyo. | 23.0 | .... | 14.0 |
| Casper | 20.5 | 22.5 | 12.0 |
| Cody | 25.0 | .... | 16.0 |
| Cheyenne | 23.0 | 25.0 | 13.5 |
| Lander | 23.0 | .... | 14.5 |
| Billings, Mont. | 26.0 | 28.0 | 15.5 |
| Butte | 27.0 | 29.0 | 17.5 |
| Great Falls | 28.0 | 30.0 | 17.5 |
| Helena | 28.0 | 30.0 | 17.5 |
| Miles City | 28.0 | 30.0 | 17.5 |
| Ogden, Utah | 26.0 | 28.5 | 16.5 |
| Salt Lake City | 26.5 | 28.5 | 16.5 |
| Boise, Idaho | 28.0 | 30.0 | 19.0 |
| Albuquerque, N. M. | 27.0 | 29.0 | 16.5 |

### PACIFIC COAST TERRITORY

**Standard Oil Co., California**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Phoenix, Ariz. | 25.5 | 28.5 | 20.5 |
| Los Angeles, Cal. | 20.0 | 23.0 | 14.5 |
| Fresno | 20.5 | 23.5 | 16.5 |
| San Francisco | 20.0 | 23.0 | 14.5 |
| Reno, Nev. | 23.5 | 26.5 | 18.0 |
| Portland, Ore. | 23.0 | 26.0 | 15.5 |
| Seattle, Wash. | 22.0 | 25.0 | 15.5 |
| Spokane | 25.5 | 28.5 | 19.5 |
| Tacoma | 22.0 | 25.0 | 15.5 |

### CENTRAL SOUTH DISTRICT

**Standard Oil Co., Louisiana**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| New Orleans, La. | 20.0 | 22.0 | 11.0 |
| Alexandria | 21.0 | 23.0 | 12.0 |
| Baton Rouge | 19.5 | 21.5 | 10.5 |
| Lake Charles | 21.0 | 23.0 | 12.0 |
| Shreveport | 19.0 | 21.0 | 10.0 |
| Memphis, Tenn | 20.5 | 22.5 | 12.5 |
| Chattanooga | 21.0 | 23.0 | 13.5 |
| Knoxville | 21.5 | 23.5 | 14.0 |
| Nashville | 21.0 | 23.0 | 13.0 |
| *Little Rock, Ark. | 21.0 | 23.0 | 12.0 |
| *Camden | 21.0 | 23.0 | 12.0 |

*Includes Arkansas State tax of 1c.

### BUCKEYE DISTRICT

**Standard Oil Co., Ohio**

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| All Ohio points | 22.0 | 24.0 | 12.0 |

### NEBRASKA DISTRICT

| | Gasoline | | Oil |
|---|---|---|---|
| | Tank wagon | Service station | Tank wagon |
| Crawford, Neb | 22¼ | .... | 13¾ |
| Omaha | 21¼ | 23¼ | 12¼ |

### STATE TAXES AND REGULATIONS

**Gasoline Sales Tax for Roads**

Arkansas, Arizona, Colorado, Connecticut, Florida, Georgia, Kentucky, Louisiana, Montana, Maryland, North Carolina, Pennsylvania, South Dakota, Mississippi and Washington, 1 cent a gallon.

Oregon, New Mexico and South Carolina collect 2 cents a gallon.

**State Inspection Tax**

Alabama—One-twentieth of 1 cent a gallon on motor fuels; ½ cent a gallon refined oil inspection.

Arkansas and South Carolina—One-eighth of a cent a gallon on gasoline and kerosene.

Florida—One-thirteenth of a cent a gallon on both gasoline and refined oils.

Kansas—One cent a barrel on gasoline and kerosene.

Georgia—One-half cent a gallon both refined oil and gasoline inspection.

Louisiana—One-eighth of a cent inspection tax per gallon on both gasoline and kerosene.

Kentucky—One-fifth of a cent a gallon on refined oil and gasoline inspection.

Minnesota, South Dakota and Wisconsin—Five cents a barrel on refined oils.

Missouri—Sales tax is 1½ cents per barrel.

Montana—State inspection is free.

Nebraska—Twenty-five cents a barrel from 1 to 5 barrels, and 6 cents a barrel on 6 bbls. or more.

## HOTEL TO BURN FUEL OIL

JAMESTOWN, N. Y., Sept. 3.—The Hotel Samuels, in this city, is putting in oil burning equipment and expects to burn fuel oil, starting some time the middle of this month.

## REFINERY TO START JAN. 1

CASPER, Wyo., Sept. 1.—The new refinery of The Texas Co., located east of the city limits, will be ready to start operating by the first of the year, according to present plans of officials. Greater headway in construction is being made than was thought possible.

## TANK WAGON CHANGES

Effective September 1, the Continental Oil Co. reduced tank wagon and service station price on gasoline 1 cent at all Colorado points.

## *Marland Improvements Will Cost $1,600,000*

PONCA CITY, Okla., Sept. 5.—Improvements are now under way at the refinery of the Marland Oil Co. here, which, when completed, will represent an expenditure of $1,600,000. The Chicago Bridge & Iron Works are now constructing tanks, which cover a storage program totaling nearly 2,000,000 bbls., including 24 80,000-bbl. tanks. The program includes additional tankage for refinery operations.

The refining capacity of the plant is being increased so that it will be able to refine 8,000 bbls. daily, in addition to 7,000 skimming capacity. It is said that the plant operated entirely as a skimming plant would have a capacity of 30,000 bbls. daily. The improvements at the refinery include additional stills and a rearrangement in operation to increase the plant's efficiency. At a cost of $620,000 the company is installing the Fleming system for the extraction of gasoline from gas oil. When completed the plant will have 18 units of the system. Eighteen pressure stills have a capacity of 445 bbls. each. All are expected to be in operation by November 1.

Concrete roads are being constructed connecting all points of the 20 acre-site on which the plant is located. A tunnel under railroad tracks connects the plant on the west side with the east side where a large part of the improvements are bing made. The company is also constructing a waterworks system to meet the enlarged demands of the plant. Water is obtained from wells located near the Arkansas River. The system which will represent an expenditure of $92,000 will have a daily capacity of 2,800,000 gallons.

## STORAGE AND DISCHARGE AT MANCHESTER, ENGLAND

WASHINGTON, D. C., Sept. 2.—Facilities for the storage and discharge of oil at the port of Manchester, England, have been greatly increased by the opening of a new oil dock at Stanlow, located on the Manchester Ship Canal near Ellesmere port. This dock is especially designed for the discharge of motor spirits and other oils giving off an inflammable vapor at less than 73 degrees F. It has been constructed at a cost of £250,000. Heretofore importation of spirits into Manchester via the canal has been prohibited on account of the danger. It is expected refineries will soon be established at Stanlow. The canal company has purchased 1,500 acres for the purpose of establishing refineries.

C.E.K.

## BIG CRUDE SHIPMENTS TO EASTERN PLANTS

(Continued from Page 60.)

of their gas oil, and by recycling they can increase their gasoline yield to approximately 60 per cent. The remaining 25 per cent is taken up by loss and fuel. This, in the opinion of these refiners, will mean that a high price will have to be paid to persuade refineries to cut this grade of material for the utilities.

Fuel oil is a little better than last week. This weakness is contributed by some to the psychological effect of the resumption of mine operations; others who have undertaken to book business in the Chicago district declare that the packers, steel mills, etc., have placed orders for coal on a $4.50 per ton basis and have withdrawn from the fuel oil market. As an example, one marketing organization points out that Armour and Swift, who have been buying about 35 cars daily, are again out of the market for fuel oil. There are many, however, who believe that industry is going to be sadly disappointed in coal deliveries and that industrials will revert to fuel oil once they discover they cannot get coal deliveries in the desired amount.

# Automatic Tubing Catchers

By Andrew M. Rowley

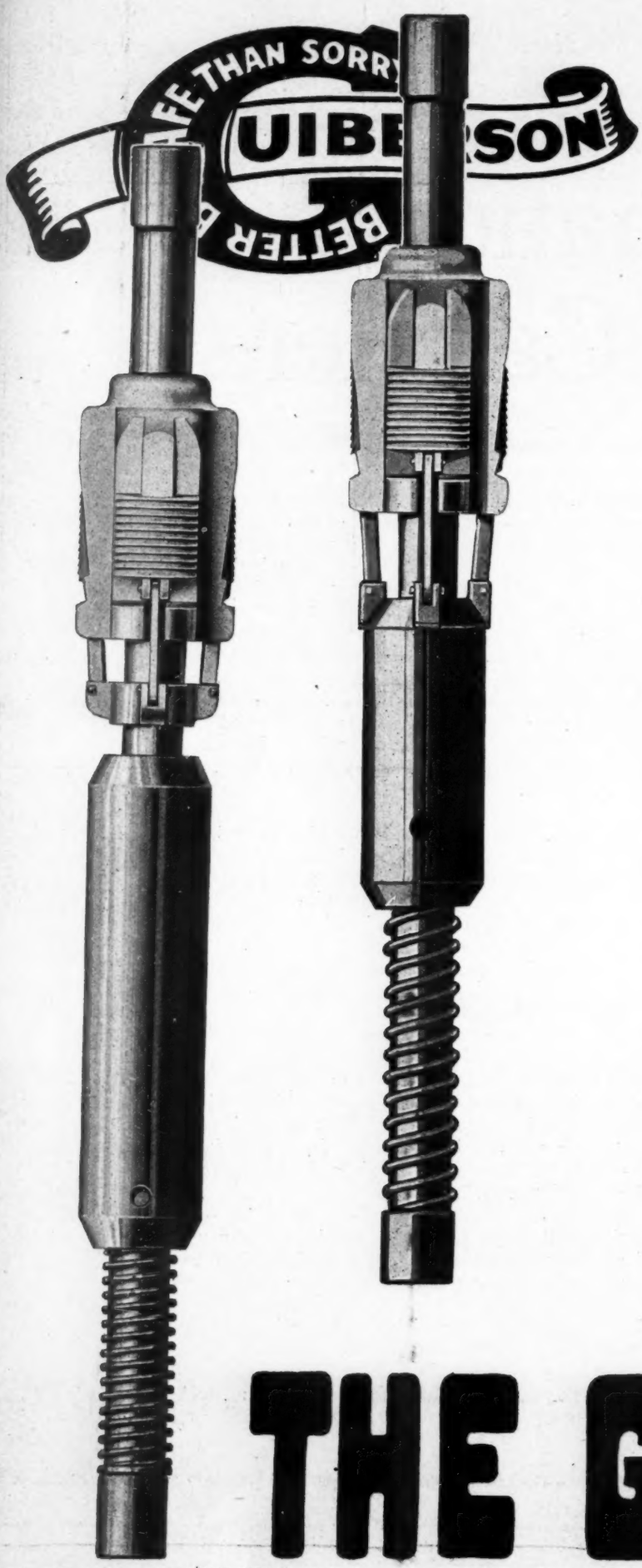
THE brief history of the oil industry forms one of the greatest romances in the annals of civilization. The present generation has witnessed an expansion in this field of public usefulness probably never before equalled in any other business. Many persons can remember the coming into general use of the kerosene lamp, replacing candles. When the lamp was perfected, kerosene was available in sufficient quantities to supply the demand for the new lighting. It has not been long, comparatively speaking, since gasoline was considered a practically useless product of petroleum and many operators in the early fields in the East surreptitiously poured their gasoline into streams at night to get rid of it easily. The development of the automobile and internal combustion engine brought gasoline into its own especial sphere. So it has been with fuel oil and countless other products of petroleum, until it is literally true now that products of petroleum are used throughout the civilized world by all persons from the time they are babies until the embalming fluid preserves their remains.

In the operating division of the industry, many improvements also have been made. Many of these, while very simple in design, are almost indispensable in the operation of oil wells economically and efficiently. In this category may be placed the automatic tubing catcher, a device without complicated construction, whose operation is based upon an immutable law of physics, insuring its absolute success. It has well been said that necessity is the mother of invention, and in no instance, probably, is this fact better demonstrated than in the case of the automatic tubing catcher.

This tubing catcher in reality is the best kind of insurance available. The ordinary kind of insurance recompenses the beneficiary for loss sustained, up to the amount of the insurance, but the automatic tubing catcher actually prevents that loss from being sustained. It obviates the effect of any accident which would result in loss of material, time and production and eliminates expensive delays due to fishing jobs, which delays often are the most costly features of the accident because of the enforced shut-down of operations which often results in a decreased production after operations are renewed.

When it is considered that it is only eight years ago this month that a rough device, rigged up in a warehouse of an operator who had just experienced an expensive tubing accident, worked successfully, the vast improvements wrought recently in the operating end of the petroleum industry may be said to equal the wonderful development in the refining and marketing divisions. As problems have arisen in the petroleum industry, the oil men, in all divisions of the work, have solved them just as L. L. Richard did in that warehouse in California when he perfected the automatic tubing catcher, which prevents tubing from falling in a well.

See Pages 64 to 75, Inclusive.




WHY does

sell th
of GU
CATC

Associated Supply Co., California
Atlas Supply Co.
Baker Casing Shoe Co., California
Bovaird Supply Co.
Bradford Supply Co.
California National Supply Co.
Frick-Reid Supply Co.
Continental Supply Co.

Frick
R. H.
Lufers
Lagech
Lacey
Mario
McEw
Nation
Norve

WHY do the

others u
RICHA

The Texas Co.
Cosden & Co., Oklahoma
Marland Refining Co., Oklahoma
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# SON CORPORATION

# Oil Industry is Discarding Inefficiency

## Rapidly Growing Use of Automatic Tubing Catchers an Evidence of Passing of "Take-a-Chance" Attitude and Resultant Wastefulness

Henry Ward Beecher once declared that the world does not need great men half so much as it needs consecrated men. It is equally true that the oil industry does not need brilliant, daring producing companies half so much as it needs efficient producing companies. The careful, steady, economically managed business is the backbone of every American industry. The exploits of some lucky, daring concern may make interesting newspaper headlines, but it is the more stolid, sure-footed element that constitute the bulk of the petroleum industry and give it the stability and prestige it has acquired.

The report of one oil company shows that this company has drilled 167 wells in its career thus far, of which 118 were paying producing oil wells and 14 were gas wells. Chance does not produce such results. The men at the head of this company are of the efficient and painstaking type.

The amount of inefficiency in an industry which has developed so extensively in such a short time as has the petroleum industry cannot help but be enormous. The big things always get first attention. Details, which, in many cases are of vital importance, often are overlooked for the time being. But today more and more of the progressive, far-sighted oil companies and oil field operators are paying more attention to these details of operation, for they realize the time has come when efficiency is one of the greatest factors in the success of any enterprise, and that the difference between success and failure now often may be traced to the difference between efficient methods and those of the "take-a-chance" or of the "hit-or-miss" style.

**Tubing Accidents Numerous**

Serious tubing accidents, for many years, were looked upon and still are regarded by a few oil operators as more or less of a part of well pumping and cleaning operations. The fact that such accidents were of rather frequent occurrence caused many operators to view them as among the many hazards and costly features of the oil industry. And yet, the loss sustained through such accidents totaled hundreds of thousands of dollars, one such accident in many instances causing a loss of from $15,000 to $20,000, while, in some cases, wells were ruined through the accidents.

Any accident to the derrick might cause the tubing in the hole to part and drop a long distance, "corkscrewing" the valuable tubing and rendering it worthless, resulting in a costly and tedious fishing job and shutting off production for weeks or months. A windstorm, blowing down a derrick, often results in the breaking of the tubing connection, allowing the pipe to fall in the hole. A fire usually has the same effect, while some defect in equipment or some carelessness upon the part of the men working at the well might easily cause the tubing to part and fall.

Any failure of equipment, such as the disengagement, slipping or breaking of clutches, hook or elevators; the parting of tubing when worn, crystallized, or when rods part and drop, might result in the tubing dropping to the bottom of the well. Other causes include the tubing being unscrewed in an effort to screw parted rods together, the plunger being placed improperly, causing it to bump down on the barrel and the tubing to part; improperly latched elevators may open and let tubing drop, or picking up tubing before it is quite unscrewed might cause a parting and drop sufficient to pull off the collar at the casing head.

The direct tangible loss from tubing accidents includes the value of the tubing itself, which usually becomes a mass of twisted pipe without any worth, except possibly as scrap, after falling to the bottom of the well, and the cost of the fishing job, extending perhaps for several months at a cost for the fishing crew of about $40 a day of 12 hours. But often the greatest loss is in production, which is stopped during the time of the fishing for the dropped tubing, and in making repairs in the well. Wells pumping 30 to 50 bbls. a day mean a considerable loss when that output is stopped for two or three months. In addition, especially in crowded fields, the production of many wells drops off considerably during the time of the fishing job. That is, wells which had been making a certain number of barrels a day up to the time the tubing fell, start off at a much lower production after operations have been resumed again.

It is not surprising that, in view of these frequent and considerable losses, thoughtful oil field operators early attempted to guard against tubing accidents. Most early efforts at solution consisted of fixed tubing supports near the bottom of the tubing. The tubing, through which oil is carried to the surface of every deep pumping well, must, in order to hang straight, be suspended from the casinghead and have no fixed means of support at any other point. Supports placed near the bottom of the tubing did not always allow for stretching or settling of the tubing, which, in many cases, would buckle and interfere with the action of the sucker rod, often wearing thin and breaking at points of aggravated friction.

**Experience Costly Teacher**

The invention of the automatic tubing catcher in 1914 has saved oil operators hundreds of thousands of dollars by preventing tubing accidents. The catcher

(Continued on Page 68.)

## BAD FISHING JOB RESULTED IN INVENTION OF TUBING CATCHER

"Yankee ingenuity" probably was never better demonstrated than by L. L. Richard, inventor of the Guiberson-Richard automatic tubing catcher, when, after he had a string of tubing break in a well he was operating, he decided the time had come for oil men to have some protection against costly, difficult and tedious fishing jobs, such as he had encountered. Mr. Richard graduated from the University of Nevada after taking a full course in mining engineering. He entered the oil business in 1909 in Coalinga, Calif., where he superintended the operations of several companies, including production of his own.

In the latter part of August, 1914, a string of tubing on one of the properties of which Mr. Richard was in charge parted and caused a nasty and expensive fishing job. He then realized fully the absolute lack of protection against such accidents and also the great necessity for such protection. In undertaking to work out a tool which would prevent or counteract the results of such accidents, Mr. Richard proceeded on the theory that if he could produce a condition where two falling bodies could be made to have different velocities of fall at the start, that is, if one could be made to fall more slowly or more rapidly than the other just after the dropping began, he could use that scheme in causing the necessary parts of a device to act and produce an automatic tubing catcher.

L. L. Richard

The idea then presented itself that a compressed spring interposed between these parts would produce the desired effect. He immediately went to a supply store and procured an old dismantled packer with slips attached. He screwed a bushing in the bottom of this packer and put babbitt in this bushing to give it the necessary weight to compress a coil spring which he interposed between this weight and the slips. He suspended this crude device from a rafter in the warehouse on one of his properties and placed a nipple of 6¼-inch casing on the floor so that the device could hang freely therein while suspended. While pulling on the rope to lift the experimental catcher to the right height the rope broke, dropping the catcher and letting Richard fall to the floor. The catcher caught with a drop of only 3 inches. The problem of falling tubing was thus solved with this crude device on September 2, 1914, and repeated trials of the device proved successful in every instance.

Mr. Richard then made sketches and sent them to his patent attorney with a description of the device so that proper application for patent might be made. He immediately had a model constructed in a local machine shop, the model operating in a 3-inch pipe. It was tested under every condition that could be thought of, with the various constructions, such as putting the weight over the head, under the head, etc., and it functioned in every instance. Upon completion of trials of the model, an order was placed for the construction of a working sized catcher. This catcher was completed shortly and placed in a well of the Jefferson Oil Co., Coalinga, Calif., on October 14, 1914, where it remained for three years.

The model catcher was shown to several oil operators, including S. A. Guiberson, Jr., who immediately became interested and signed a contract with Mr. Richard to manufacture and promote the sale of the device for the life of the patent. Manufacture was started immediately and 175 tubing catchers were sold the first year. In the second year 300 catchers were put into use and since that time their use has spread to every corner of the earth and they are found in every known oil field of any consequence where tubing is cased in pumping wells. The annual output of the Guiberson-Richard tubing catchers now runs into several thousands, more than 15,000 already having been placed in use to this time.

## DRILLER DROPPED 2,400 FEET OF TUBING TO SEE IF CATCHER OPERATED

Dropping 2,400 feet of 3-inch tubing down into a deep well "just to see if that tubing catcher would work" was a stunt pulled off recently on a lease 3 miles from Oilton, Okla. The catcher worked all right, much to the delight of the driller and the unbounded relief of R. B. Martin, well known oil man of Tulsa, who had charge of operations on the lease.

Martin was superintending some work on the lease, including the cleaning out of the well in question. George Robinson was in direct charge of the work at the well. Martin had left the well to go into the bunk house when he heard the engine "racing." Rushing to the well, Martin exclaimed:

"What is the matter, George?"

"Oh, nothing!" George answered. "I just dropped that 2,400 feet of tubing into the hole to see if that tubing catcher would work. It did."

The tubing fell only 4 inches when the catcher caught and held it fast.

## EARTHQUAKES CAUSED BY COMPANIES TAKING OIL FROM EARTH'S AXIS

In connection with the recent earthquakes in Mexico and California, a darkey preacher in Alabama is said to have evolved an ingenious theory, which, we must admit, fits very well into existing circumstances. He is reported to have addressed his flock as follows:

"We have received anudder warnin' not to go pesticatin' into de ways of Providence. De earf, my bredden, revolutes on its axles, an' it takes a right sma't ob grease to keep it lubricated. So de good Lord done put petroleum inside de earf to keep de axles greased.

"Den bye and bye, 'long come all dese hyah ile companies, punchin' holes in de ground clear down into de bearin's, and quensecontly all de ile comes squirtin' out. Fust thing we know dere's a hot box, and de earf squeaks and rumbles and dat's de earfquake. If day don't quit it purty soon dere won't be no moah grease left and de earf will stick tight on its axles and won't go 'round no moah!"

**PREPAREDNESS**

# Now Offered In Two Types

THE NEW **TYPE B** Guiberson-Richard Tubing Catcher was designed for those who desire a shorter, lighter, more compact catcher.

STRIKER WEIGHT is directly connected to the slips, and is shorter and lighter than in Standard Design—yet heavy enough to overcome any tendency to sand up or become clogged with paraffin.

This design supports part of weight of STRIKER from the SLIPS, lessening any tendency of spring to fatigue. This also prevents vibration of striker weight while lowering tubing or while pumping.

DOVETAILED track confines SLIPS absolutely to their path —prevents them from twisting or from flying out and catching the ends of the casing at each collar as tubing is pulled.

PROVED fully as reliable as the Standard Type, by trials in many wells over a period of many months.

***Ordinary Sizes Only $90***

**All Sizes in Both Types Carried at Frick-Reid Stores**

## Frick-Reid Supply Co.

**TULSA** **PITTSBURGH**

**Stores in the fields of activity**

**SERVICE**
**is a part of the stock on hand at every "F-R" Store**

# Oil Industry Discarding Inefficiency

(Continued from Page 66.)

is so simple in its construction and operation that there are no complicated parts to get out of order, with the result a survey of oil fields throughout the country develops the fact that in practically every instance where tubing parted or started to fall, from any cause, the tubing was caught if it were equipped with an automatic tubing catcher. A great trouble has been that many oil men had to experience tubing accidents, resulting in considerable loss in money and time, before they installed tubing catchers as a necessary and most important part of their equipment. This fact has been hard to comprehend when the comparatively small cost of the automatic tubing catcher is considered, this cost ranging from $90 to $150 each, while the life of such a catcher has been demonstrated to be for several years under ordinary conditions.

One instance showing that experience is a rather costly teacher was to'd by a field salesman of the Guiberson-Richard tubing catcher. A serious tubing accident occurred in a well on the border line of a lease. After this accident the operator installed a tubing catcher. A second accident occurred on the same well and the catcher held the tubing safely. On a neighboring lease was a large operator going along on the "take-a-chance" plan, who never had used a tubing catcher. He knew of the first accident on the well adjoining his lease and the loss sustained by the operator of that lease and also knew of the second accident and the fact no loss was sustained that time, because of the work of the tubing catcher. Still he was obdurate. He could not see the idea of spending from $90 to $150 for a tubing catcher. In two weeks after his neighbor had had the second tubing accident, a large section of tubing parted and fell in one of his wells, the tubing twisting in the hole and causing a loss in a fishing job, ruined tubing and of production amounting to about $3 000. He then equipped every one of his pumping wells with an automatic catcher.

Accidents to tubing on wells located in remote places reached only over rough roads are especially costly due to difficulties in procuring fishing crews, and providing adequate housing for these men while working and in transporting new tubing and other material to the well. An instance of such a condition occurred on the Helen Hicker lease, 30 miles from a railroad, in the woods in Oklahoma. When the tubing in the well on this lease dropped, it fell a considerable distance to the bottom of the well, "corkscrewing" and twisting in such a manner the fishing job required considerable time while the loss of the tubing, cost of labor involved in the fishing job, additional charge due to the inaccessibility of the well and the loss of production, brought the loss sustained from this accident to many times the cost of the catcher.

But efficiency is taking the place of inefficiency in the oil industry and oil operators are realizing more and more it is better to be safe than sorry.

The automatic tubing catcher is one of the most ingenious devices perfected to solve oil field operations. When it is placed properly in a well its presence is not noticed, it does not cause any inconvenience and does not in any way interfere with the operations of pumping, pulling tubing or placing tubing in a well. It usually is placed just above the working barrel on the joint of tubing at the bottom of the string. A piece of standard tubing runs straight through the catcher with a head cast directly onto the tubing and forming a part of it. The oil in a pumping well ordinarily stands up several hundred feet from the bottom of the well so the tubing, through which the oil is pumped, ends several hundred feet above the bottom of the well and hangs free from the top of the well. Three slips, with notched teeth, slide freely up and down on dovetails on the head of the catcher. These slips are tied together by links to a controlling ring, which also slides freely up and down on the tubing. A shoulder at the bottom of the head holds the slips from leaving the head. A striker weight fits loosely around the tubing and rests on a spring, which, in turn, rests on the lower tubing collar, at the bottom of the catcher. There is a space of about 1½ inches between the bottom of the controlling ring and the top of the striker weight.

When, from any cause whatever, the tubing suddenly drops, the force of gravity tends to pull downward at equal acceleration all parts of the tubing and catcher. However, the weight of the striker had compressed the spring on which it rested somewhat and when the fall starts this compression is released, the spring expanding to its normal position when not compressed by the weight. This expanding of the spring retards the acceleration of the striker weight in falling, causing it to start to fall more slowly than the remainder of the catcher and tubing. This results in the striker weight coming into contact with the controlling ring, driving it and the connected slips upward in respect to the balance of the catcher. These slips, moving upwards on the head of the catcher, are forced outward at the same time by the tapering faces on which they slide and they come into wedging contact with the well casing, bringing catcher and tubing to an instant halt. All this occurs while the tubing is dropping about 3 inches, that being the extent of the fall of tubing when an automatic tubing catcher is connected to the tubing.

As the tubing catcher is attached to the bottom of the tubing, it hangs often in oil or oil laden gas and thus automatically is lubricated. As it hangs free in the well and is attached to the bottom of the casing, the catcher is in operation all the time tubing is in the well, both when the tubing is being placed in the well and when it is being drawn out, hence it serves to prevent the tubing from failing at all times, those times when tubing is being placed in the well or drawn from it being especially conducive to tubing accidents.

## *Tubing Accident Cost One Oil Worker His Job*

Being discharged after the owners of a well, who had neglected to take his advice and install a tubing catcher, became discouraged after fishing for five months for some dropped tubing, was one of the experiences Harry Crowthers, an oil man of the Central West fields had in connection with tubing accidents. Crowthers was responsible, to an extent, for the installation of the first automatic tubing catcher in the Wooster, Ohio, oil fields, his previous experience with accidents causing him to regard a catcher as one of the most important features of oil well equipment. In telling of some of his experiences in the Wooster Fields, Mr. Crowthers said:

"There was a well on the Craven Farm owned by the Preston Oil Co. We were pulling tubing, to clean out, and about 2,000 feet dropped back down the hole for us to fish out. We fished about four months and finally put the well to pumping again, with a new string of tubing and pumping outfit. The well was doing about 10 bbls. a day before this accident and about 5 bbls. a day after the time we went fishing. This happened before there was a tubing catcher introduced in the Wooster Field.

"Another one happened on the Mook farm, well No. 2, owned by a concern of Akron, Ohio. I helped to pump and look after their three wells that had a poor string of common tubing in each of them. These wells were 3 500 feet deep. I suggested to the superintendent to put on some tubing catchers and he said he would call me later. About four or five months later we had to pull tubing at well No. 2 to find a leak. While doing so, the tubing parted at the joint that was leaking. We had about 500 feet and the other 3,000 feet went back to the bottom in a bunch. We fished for five months and the owners got discouraged and fired me, and then sold the lease to another company. The new company finished the job, put in a new string of upset end tubing and pumping outfit. This well was making about 5 bbls. a day before the accident and about 2 after the accident.

"My latest experience with a tubing catcher proved they are worth far more than they cost. I was helping pull tubing at a well on the Firestone farm. When we were putting it back down the hole, a joint that we had just taken the elevator off of parted, leaving about 2,000 feet go down the hole. It did not go but a few inches as Mr. Tubing Catcher was there to stop it. All we had to do then was to put in a different piece of tubing, raise it up off the tubing catcher and go ahead with our work just the same as if nothing had happened."

## *Catchers Most Important In Wells After Shooting*

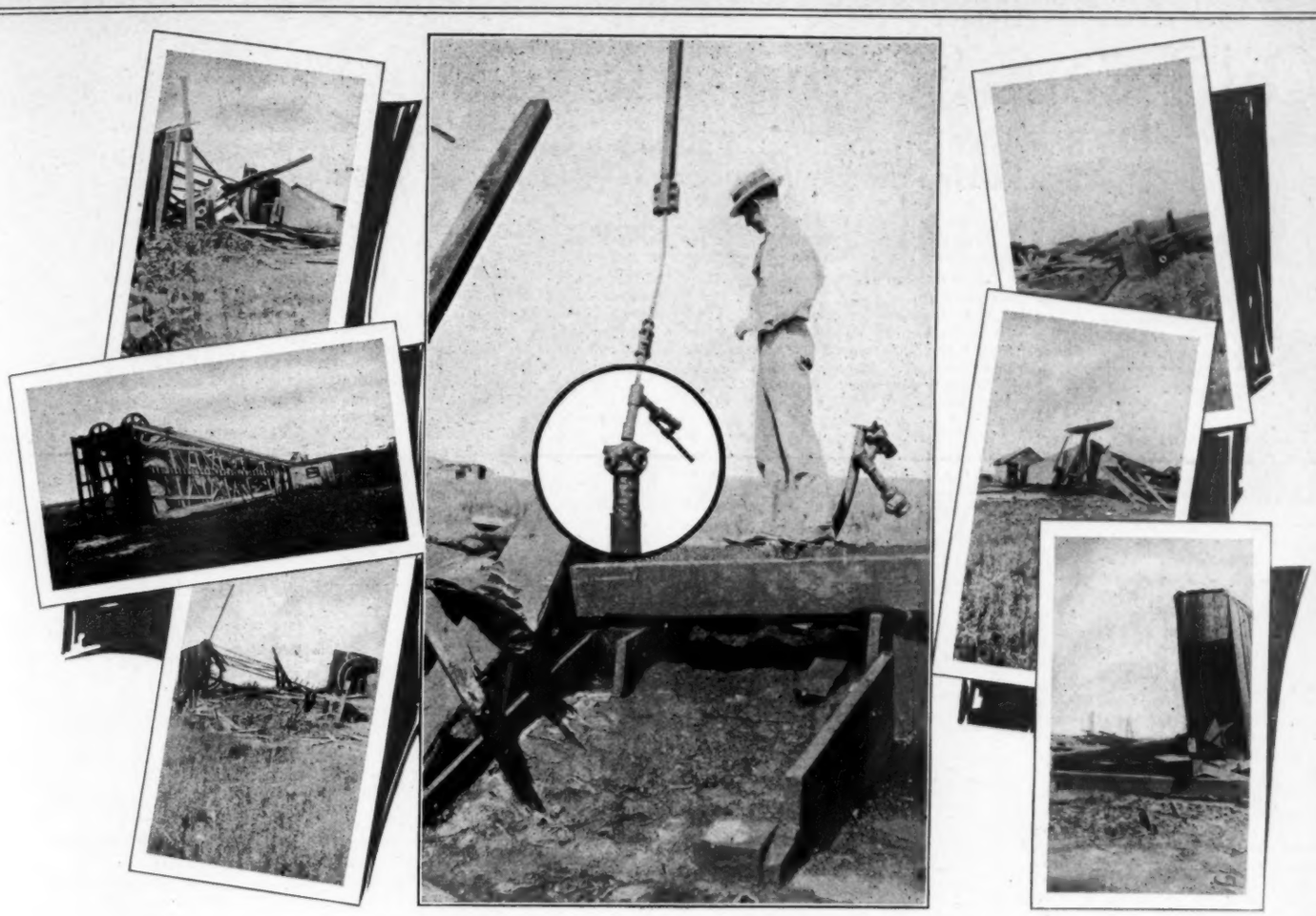
That automatic tubing catchers are especially important and valuable in pumping wells which have been shot was a statement made by J. E. Donnelly, production manager of the Cortez Oil Co., who said he has used Guiberson-Richard tubing catchers on his wells for the past five years or more. He said such catchers had prevented many accidents in wells under his supervision and that in no instance in his own experience or as far as he ever heard, had there been an occasion where one of these catchers failed to operate successfully.

Mr. Donnelly emphasized the fact that catchers are especially important in wells pumping considerable water. He said in the Cushing Field of Oklahoma, where a large quantity of water had to be pumped, he found automatic tubing catchers indispensable, as the tubing had a greater tendency to wear and part where much water was pumped. He said he had found the life of tubing catchers to range from two to five years at least, with constant use, those operating in wells with considerable water lasting about two years. Some catchers he had used four or five years, he said, were as good as ever at the end of that time.

When a well is shot, there is a large hole made on the bottom and often, according to Mr. Donnelly, when tubing fell in these wells, it would break and fall over in the hole, making it almost impossible to fish it out. In several such wells where accidents occurred, and where the wells were not equipped with catchers, the fishing job continued over a period of from two to three months and in some instances, the well never was entirely cleared of the broken, twisted tubing. Mr. Donnelly cited one specific instance where a tubing accident in a well not equipped with a catcher resulted in a fishing job which cost $3,000 for labor alone and a loss in production of 30 bbls. of oil a day for seven weeks. He said at the end of the fishing job there still was some tubing in the hole which could not be pulled out.

**IF WE ONLY HAD HAD A TUBING CATCHER!**

**A mass of crooked tubing which was fished from a well of the Preston Oil Co. This tubing parted under a collar while being pulled, an especially dangerous time in the operations in regard to tubing accidents and a time when automatic tubing catchers, which hang free in the well, are of the utmost importance. When the tubing parted under a collar, 2,500 feet dropped down the hole, much of it "corkscrewing," as shown above. It required a long time to fish this ruined tubing from the well, involving a considerable loss in tubing, cost of fishing and production. The men shown in the picture are Charles Brennon, of the Preston Oil Co., and W. H. Wigton, of the Guiberson Corporation.**



**At Augusta, Kansas, After the Storm of July 10th**

# Just *One* Cause of Dropped Tubing

Standard

In probably the majority of cases, when a storm destroys the derrick of a pumping well, the TUBING DROPS!

Added to the above-ground loss is a loss of $1,000 to $20,000 underground, due to ruined tubing, fishing costs, and suspended production.

**OTHER CAUSES:** Yet that's only one source of tubing accidents. Here are some other causes—and there are a hundred more:

Destruction of derrick by fire.

Disengagement, slipping, or breaking of clutches, belt, calf chains, bull ropes.

Breaking of tubing line, block hook or elevators.

Parting of tubing when worn.

Parting of tubing when crystallized.

Parting of tubing when rods part and drop.

Tubing unscrewed in effort to screw parted rods together.

Plunger improperly placed may bump down on barrel and cause tubing to part.

Improperly latched elevators may open and let tubing drop.

Picking up tubing before quite unscrewed may cause parting and drop sufficient to pull off collar at casing head.

Hadn't you better let us equip each of your pumping wells with GUIBERSON-RICHARD TUBING CATCHERS—ordinary sizes only $90 each? Many producers now use them on **every** well.

Type B

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# Oil Issues Strong, Increasingly Active

## Standard Group, Mex. Petroleum and Other Prominent Stocks Had the Confidence of Investors. New Flotations

By N. O. FANNING
Room 734, No. 30 Church St., New York

NEW YORK, Sept. 2.—A further upswing and increased activity in oil stocks featured the past week's sessions of the securities markets. The declaration of a quarterly dividend of $1.25 per share by the Standard Oil Co. of Kentucky, putting that stock on a $5 basis (20 per cent) instead of a $4 basis (16 per cent), as formerly, was the outstanding development.

The other Standard Oil issues were strong, Standard of New Jersey advancing to 186¾, Standard of California to 114, Standard of Indiana to 115¼, and International Petroleum to 22. Standard Oil of New York and Vacuum Oil, issues which have been unusually active and both of which reached high records for the year a little more than a week ago, remained strangely inactive and lower during the past week. Standard Oil of New Jersey preferred went to a new high for the year, touching 118¼.

The upward movement in the oils has by no means been confined to the Standard group, however. Mexican Petroleum has been a conspicuous example of strength, advancing to 199½, or within 5 points of the year's high price. The Texas Co. advanced to within a small fraction of 50, and Sinclair Consolidated sold up to 33⅞.

The present upswing in petroleum securities is significant in that the majority of issues are either getting up to their previous highs for this year, or are registering new highs. Despite this, crude oil prices are 75 per cent lower than they were two or three months ago, and, although there has been an end to the piling up of crude and refined oil stocks, this is regarded as seasonal. On the other hand, recent developments in the industrial world have generally reacted favorably on the consumption of oil, particularly fuel oil and gasoline. Lubricating oil consumption has been somewhat smaller than might be expected, but this is expected to pick up in the near future. On the present basis of crude prices the refiners, at least, are in a position to make money.

In the face of the coal and railroad strikes, some of the most important financiers in the country are predicting that a wave of prosperity, which has been expected during the last year and a half, is due to sweep the country before long. This optimism is contagious, and the advance in securities seems to be an additional criterion of better business.

### New Oil Flotation

The General Petroleum Corporation will offer to stockholders, at par, for a period of 30 days, $5,000,000 five-year 6 per cent convertible notes. These notes have been underwritten by Blyth, Witter & Co., bankers, who will publicly offer any notes not subscribed for by stockholders.

The purpose of the issue is to enable the company to conserve its oil supplies and purchase crude oil at the present low prices.

The new notes are convertible into common stock during the first year on the basis of $100 for the notes and $115 for the stock; during the second year, $100 for the notes and $120 for the stock, while during the third, fourth and fifth years, the notes are convertible on a basis of $100 for the notes and $130 for the stock.

The conversion privilege extends until 10 days after redemption date. The notes cannot be called prior to 18 months after September 15, 1922, being redeemable at 104 before September 15, 1924, 103 to 1925, and 102 to 1926, and at par thereafter.

John Barneson, President of the General Petroleum Co., states in connection with the new financing that present conditions will soon be rectified by a decrease in production and an increase in consumption, the present surplus in California, where the company operates chiefly, being due to flush production.

The decline in Mexico's output has opened up new fields to California, he says. The General Petroleum Corporation has added, during the past year, 1,320,000 bbls. to its storage capacity. The company's total production in California is now about 31,700 bbls. daily, with an additional 5,000 bbls. shut in.

He also states that the company expects to bring in eight more wells within the next 30 days, of which five are at Santa Fe Springs and three at Signal Hill. This should increase production considerably. The General Petroleum Corporation recently sold 100,000 tons of fuel oil to Japanese interests.

Including the General Petroleum issue, new oil flotations during August aggregated $6,668,000 par value, as follows:

| | |
|---|---|
| General Petroleum 6 per cent convertible notes | $5,000,000 |
| Shell Union Oil common stock | 1,668,000 |
| Total | $6,668,000 |

This compares with $30,000,000 in July, of which $25,000,000 was a refunding issue, and $28,846,100 in June, of which $15,000,000 was for refunding purposes.

Recent new oil financing, it will be noticed, has been on a considerably smaller scale than that earlier in the year. April flotations aggregated $73,000,000, while in May new issues totaled $35,852,500. The following table shows the par value of issues during the past few months:

| | |
|---|---|
| August | $ 6,668,000 |
| July | 30,000,000 |
| June | 28,846,100 |
| May | 35,852,500 |
| April | 73,000,000 |
| Total | $174,366,600 |

Of the aggregate issues of June and July, combined, $45,000,000 represent refunding issues, so that the new financing for corporate purposes was probably much smaller than the totals for these months indicate.

### Dividends

Standard Oil Co., of Kentucky, has declared a quarterly dividend of $1.25 per share, payable October 2 to stockholders of record September 15. This compares with $1 per share paid the previous quarter. The stock has a par value of $25 per share.

The Borne-Scrymser Co. has declared the regular annual dividend of $20 per share, payable October 15 to stockholders of record September 15.

The Southwest Pennsylvania Pipe Lines Co. has declared the regular quarterly dividend of $1 per share, payable October 2 to stockholders of record September 25.

The Humphreys Oil Co. has declared the regular quarterly dividend of 5 per cent, payable September 15 to stockholders of record August 31.

### Miscellaneous

The Empire Gas & Fuel Co. of Maine, a subsidiary of the Cities Service Co., has contracted to purchase the entire holdings of the Planet Petroleum Co. in northern Texas. These properties aggregate several hundred acres and are located in the Electra Field. They have a daily output of 5,000 bbls. of high-grade crude oil, which comes from several sands. Included is an important 40-acre tract adjoining other Empire properties in the Duncan-Surber Pool, in Oklahoma. Arrangements are now being made to store the output from these leases in line with the storage policy of the Empire Co. Purchase price of the properties has not been made public.

### NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

| No. | Stock— | Par | Annual Dividend | Closing Quot.— Sept. 5 | Aug. 29 | Range, 1922— High | Low |
|---|---|---|---|---|---|---|---|
| 1. | Associated Oil | 100 | 6 | *117 | 117½ | 135½ | 99 |
| 2. | Atlantic Refining | 100 | 20 | *1000 | *1000 | 1145 | 900 |
| 3. | Barnsdall A | 25 | .. | 36⅜ | 31⅜ | 56¼ | 19⅜ |
| 4. | Caddo Central Oil | .. | .. | 10½ | *10⅜ | 15⅛ | 10 |
| 5. | California Petroleum | 100 | .. | 64 | 63¼ | 71⅞ | 43⅛ |
| 6. | Cosden & Co. | .. | †2⅛ | 48½ | 47⅝ | 53¼ | 31⅝ |
| 7. | General American Tank | .. | †3 | 67¾ | 61½ | 67¾ | 45⅝ |
| 8. | General Asphalt | 100 | .. | 69 | 67½ | 73⅝ | 55⅛ |
| 9. | Houston Oil | 100 | .. | 80 | 79½ | 85 | 70 |
| 10. | Indiahoma Refining | 5 | .. | 3⅝ | 3⅝ | 4⅜ | 3¼ |
| 11. | Indian Refining | 10 | .. | *8 | *8 | 11⅝ | 5¾ |
| 12. | Invincible Oil | 50 | .. | 14½ | 14¾ | 20¼ | 12⅛ |
| 13. | Island Oil & Transport | 10 | .. | ⅝ | ⅝ | 3 | ⅝ |
| 14. | Kansas & Gulf | 10 | .. | 4⅝ | 4⅞ | 7½ | 3⅞ |
| 15. | Marland Oil | .. | †4 | 40½ | 41⅞ | 46⅝ | 22⅝ |
| 16. | Mexican Petroleum | 100 | 12 | 194½ | 184½ | 204½ | 106¾ |
| 17. | Middle States Oil | 10 | 12 | 13⅜ | 13½ | 16 | 11⅝ |
| 18. | Oklahoma Producing and Refining | 5 | .. | 2¾ | 2½ | 4⅝ | 2¼ |
| 19. | Pacific Oil Co. | .. | †3 | 57⅛ | 57½ | 69⅝ | 44⅝ |
| 20. | Pan-American | 50 | 12 | 83⅜ | 80⅜ | 86½ | 48⅞ |
| 21. | Panhandle Producing & Refining | .. | .. | *6 | *6 | 12 | 5½ |
| 22. | Phillips Petroleum | .. | †2 | 51⅞ | 48⅝ | 59¼ | 28¼ |
| 23. | Pierce Oil | 25 | .. | 7⅝ | 7⅞ | 12 | 7 |
| 24. | Producers & Refiners | 50 | .. | 48⅛ | 44⅛ | 50 | 24⅛ |
| 25. | Pure Oil Co. | 25 | 3 | 33⅜ | 32⅜ | 38⅝ | 26⅝ |
| 26. | Royal Dutch, N. Y., sh | 13.40 | †5.20 | 59⅛ | 56⅛ | 67 | 47⅛ |
| 27. | Shell Transport | 10 | † .74 | 40½ | 38 | 48½ | 35⅝ |
| 28. | Sinclair Consolidated | .. | †2 | 33½ | 33¼ | 38⅝ | 18⅝ |
| 29. | Standard of California | 25 | 16 | 113¼ | 111⅝ | 121 | 91⅝ |
| 30. | Standard of New Jersey | 25 | 20 | 184 | 183 | 198¾ | 169 |
| 31. | Standard of New Jersey, pfd | 100 | 7 | *117 | 116½ | 117⅝ | 113⅜ |
| 32. | Superior Oil | .. | .. | 7½ | 6½ | 10¼ | 4⅜ |
| 33. | The Texas Co | 25 | 12 | 48⅝ | 48⅝ | 50⅛ | 42 |
| 34. | Texas & Pacific Coal & Oil | 10 | 10 | 26 | 25½ | 32⅝ | 23 |
| 35. | Tide Water Oil | 100 | .. | *127 | 127 | 137¼ | 109¾ |
| 36. | Transcontinental | .. | .. | 14⅜ | 14¾ | 20⅛ | 7⅛ |
| 37. | Union Oil of Delaware | .. | .. | 19 | 19⅜ | 25 | 17¼ |
| 38. | Union Tank, pfd | 100 | 7 | *107 | *107 | 110½ | 102 |
| 39. | White Eagle Oil & Refining | .. | †2 | 27⅛ | *26¼ | 29½ | 25 |
| 40. | White Oil | .. | .. | *8 | 8⅛ | 11⅝ | ⅞ |
| | **Standard Oil Stocks** | | | | | | |
| 41. | Anglo-American Oil | 5 | 10 | 20¼ | 19⅞ | 27⅞ | 16¼ |
| 42. | Borne Scrymser | 100 | 20 | *445 | *415 | 415 | 335 |
| 43. | Buckeye Pipe Line | 50 | 16 | *97 | *96 | 101 | 84½ |
| 44. | Chesebrough Manufacturing | 100 | 14 | *195 | *195 | 205 | 177 |
| 45. | Continental Oil | 100 | 8 | *141 | *140 | 150 | 123 |
| 46. | Crescent Pipe | 50 | 6 | 35⅛ | *33 | 37 | 28 |
| 47. | Cumberland Pipe | 100 | 8 | *147 | *145 | 165 | 120 |
| 48. | Eureka Pipe Line | 100 | 8 | *95 | *92 | 104½ | 78½ |
| 49. | Galena-Signal, common | 100 | .. | *51 | 51⅛ | 62 | 40 |
| 50. | Illinois Pipe Line | 100 | 16 | *169 | 168 | 198 | 158 |
| 51. | Indiana Pipe Line | 50 | 20 | *96 | *95 | 106 | 82 |
| 52. | National Transit | 12.50 | 14 | *26 | *26 | 31½ | 26 |
| 53. | New York Transit | 100 | 16 | *170 | *167 | 181 | 140 |
| 54. | Northern Pipe Line | 100 | 10 | *105 | 106 | 109 | 91 |
| 55. | Ohio Oil Co. | 25 | 27 | 283 | 282 | 335 | 256 |
| 56. | Penn Mex Fuel | 25 | .. | *27 | *27 | 41 | 16½ |
| 57. | Prairie Oil & Gas | 100 | 19 | *595 | *590 | 648 | 518 |
| 58. | Prairie Pipe Line | 100 | 12 | 264 | 260 | 270 | 225 |
| 59. | Solar Refining Co. | 100 | 10 | *340 | *340 | 375 | 340 |
| 60. | Southern Pipe Line | 100 | 8 | *95 | *94 | 105½ | 75 |
| 61. | South Penn Oil | 100 | 6 | *205 | *210 | 249 | 165 |
| 62. | South West Pa. Line | 100 | 4 | *63 | *60 | 70 | 50½ |
| 63. | Standard of Indiana | 25 | 16 | 114⅝ | 114⅛ | 124¼ | 83⅝ |
| 64. | Standard of Kansas | 100 | 12 | *525 | *530 | 575 | 500 |
| 65. | Standard of Kentucky, w. i. | 25 | 16 | 104¾ | 106 | 108¼ | 76 |
| 66. | Standard of Nebraska | 100 | 10 | *175 | *178 | 210 | 160 |
| 67. | Standard of New York | 100 | 16 | 451 | 440 | 457 | 341 |
| 68. | Standard of Ohio | 100 | 16 | *450 | *450 | 480 | 380 |
| 69. | Swan & Finch | 100 | .. | *32 | *32 | 39 | 28 |
| 70. | Vacuum Oil | 100 | 9 | *467 | 462 | 482 | 298 |
| 71. | Washington Oil | 10 | 20 | *20 | *22 | 32 | 20 |
| | **Miscellaneous Stocks** | | | | | | |
| 72. | Atlantic Lobos Oil | .. | | *10 | 10¼ | 12½ | 8 |
| 73. | Cities Service, banker's shares | .. | ‡21 | 20 | 20 | 24⅜ | 17 |
| 74. | ‡Gulf Oil Corporation | 100 | 6 | 515 | *515 | 634 | 310 |
| 75. | ‡Humble Oil & Refining | 100 | 8 | *225 | *230 | 243 | 212½ |
| 76 | Imperial Oil (Ltd) | 25 | 12 | 113 | 113 | 126 | 97½ |
| 77. | International Petroleum (Ltd.) | .. | x25 | 22¼ | 21⅞ | 27⅝ | 14 |
| 78. | ‡Magnolia Petroleum | 100 | 6 | *173 | *175 | 196 | 150 |

*Bid, no sales. †In dollars. ‡6 per cent in cash and 15 per cent stock dividend declared; now being paid in scrip. ‡Quotations furnished by Carl H. Pforsheimer & Co. x Cents per share.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange weekly was as follows:

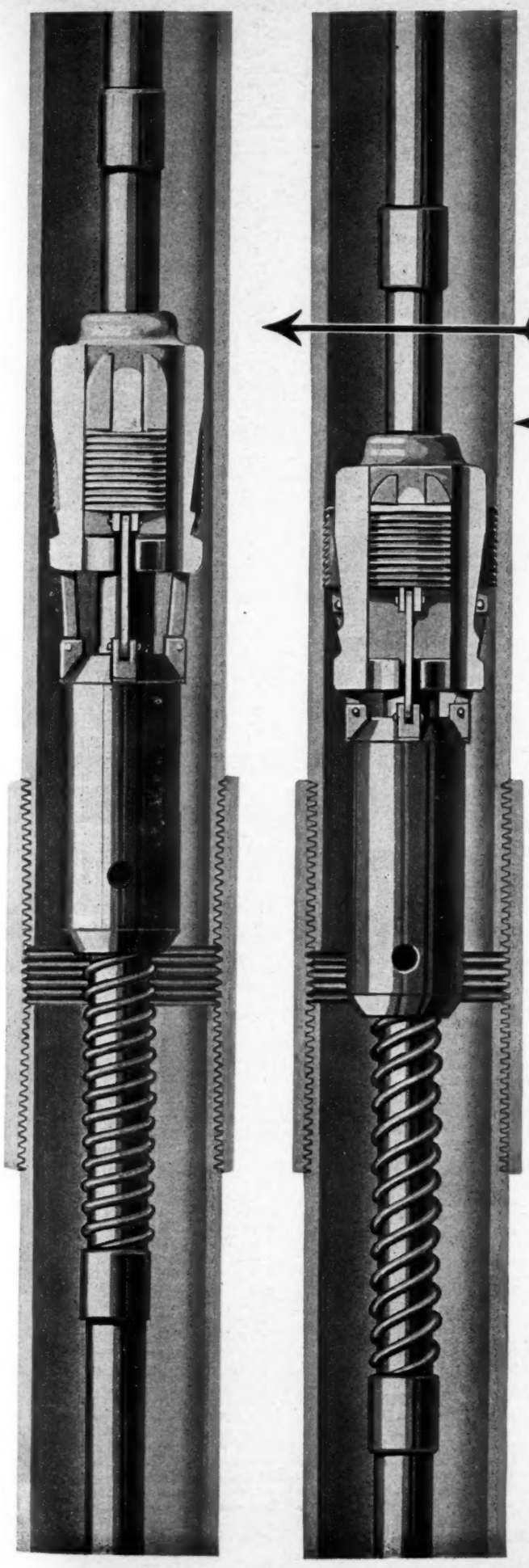
| | | | | | |
|---|---|---|---|---|---|
| Sept. 5 | 59.30 | July 25 | 53.99 | June 13 | 55.96 |
| August 29 | 57.75 | July 18 | 55.12 | June 6 | 60.15 |
| August 22 | 57.63 | July 11 | 56.60 | May 29 | 59.15 |
| August 15 | 56.97 | July 3 | 55.93 | May 23 | 57.56 |
| August 8 | 56.03 | June 27 | 57.26 | May 16 | 55.90 |
| August 1 | 56.35 | June 20 | 57.56 | May 9 | 55.10 |

### DOOLEY WITH NATIONAL SUPPLY

R. H. Dooley, formerly connected with the purchasing department of the Magnolia Petroleum Co., is now a member of the sales staff of the National Supply Co. He is working out of the Tulsa office.

### SURVEY NEW GAS LINE

MILES CITY, Mont., Sept. 2.—The Northwest Public Utilities Co. has made a preliminary survey looking to the construction of a gas line from this city to the Glendive-Baker Field. It is understood that the line is to be 10-inch and will cost approximately $1,500,000.



# Protect Your Pumping Wells

① **Well is pumping—Catcher hangs free**

② **Tubing Drops—Catcher Grips**

You'd never know this catcher was on your tubing, until it's **needed!**

It forms a short section of tubing, inserted near bottom of string, either above or below working barrel, as desired.

From the moment it enters the casing at top of well, your tubing **CANNOT DROP.**

It hangs free until a drop occurs. Then the compressed spring's upward shove retards drop of Striker Weight, which drives Slips into wedging contact with casing walls, as shown in figure 2. Total drop is less than four inches.

THE NATIONAL SUPPLY COMPANIES have distributed a large proportion of the 15,000 GUIBERSON-RICHARD TUBING CATCHERS now in use.

***Stocks Carried at all Stores***

# The National Supply Companies

# The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

(THE OIL INVESTORS' JOURNAL)

Published Weekly at 114-116 West Second Street, Tulsa, Oklahoma, by THE PETROLEUM PUBLISHING CO.


## CONTENTS


NEW POOL NORTH OF CURRIE, NAVARRO CO., TEX..... 9
EDITORIAL PAGE ..... 10
GIANTS FIGHT FOR ASIATIC OIL SUPREMACY..... 11
WHO'S WHO AND PERSONALS..... 12
RECENT DEVELOPMENT OF FUEL OIL BURNING..... 14
SUMMARY OF AUGUST OPERATIONS..... 16

### FIELD OPERATIONS

OKLAHOMA-KANSAS ..... 18
NORTH LOUISIANA-ARKANSAS ..... 24
NORTH CENTRAL TEXAS..... 28
EAST CENTRAL TEXAS..... 34
CENTRAL WEST..... 36
PENNSYLVANIA-WEST VIRGINIA ..... 38
GULF COAST ..... 40
WEST KENTUCKY-TENNESSEE ..... 42
WYOMING ..... 44
MEXICO ..... 46
CANADA ..... 48
CALIFORNIA ..... 50
LATE FIELDS ..... 54

### MARKETING AND REFINING

PURE OIL CO.'S MARCUS HOOK REFINERY..... 56
REFINED AND CRUDE MARKETS.....58-59
BIG CRUDE SHIPMENTS TO EASTERN PLANTS..... 60
TANK WAGON QUOTATIONS..... 62
OIL ISSUES STRONG, INCREASINGLY ACTIVE..... 70
OUTPUT OF REFINERIES IN U. S. FOR JUNE, 1922..... 76
UNION BUYS 20,000,000 GALLONS KEROSENE..... 76

### MISCELLANEOUS

AUTOMATIC TUBING CATCHERS..... 63
OIL INDUSTRY DISCARDING INEFFICIENCY..... 66
PETROLEUM EQUIPMENT ACTIVITIES..... 84
NATURAL GAS DEVELOPMENTS..... 86
CRUDE PETROLEUM STATISTICS FOR JULY, 1922..... 88
87 NEW WELLS IN CALIFORNIA SHOW 55,470 BBLS..... 92
GEOLOGISTS' REPORT ON KEVIN-SUNBURST FIELD..... 98
SAFETY MEASURES IN OIL INDUSTRY.....104
SURVEY OF NORTHERN OKLAHOMA FIELDS.....108
JULY PIPE LINE REPORT.....114



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### SPECIAL CORRESPONDENTS

Kansas City, Fort Worth, Omaha, Philadelphia, Louisville, Cleveland, Denver, Dallas, New Orleans, San Francisco.


## LAST MINUTE *from* OKLAHOMA

The new well belonging to Wilson and others and located on the McIntosh farm, SE cor. SW, Section 29-15-10, Creek County, was flowing at the rate of 450 bbls. a day from 4 feet in the sand found at 3,242 feet.

The Prairie Oil & Gas Co. was completing 2 more wells in the Midwest Pool, Okfuskee County. No. 2 Grayson, SE cor. SW SW, Section 1-10-9, was swabbing 75 bbls. a day from pay at 3,105-25 feet. No. 3 on the lease, CWL SW SW, is good for 250 bbls. a day from a total depth of 3,125 feet. The same company had the top of the upper sand at 3,052 feet in No. 4 on the lease, NW cor. SW SW, and the hole was filling with oil. The Foster Oil Co. was trying to mud off 35,000,000 feet of gas in No. 2 Pigeon, NE cor. SE, Section 2-10-9, the gas being from the upper sand at 3,057-80 feet. The same company has a 75-bbl. well from two sands in No. 1 Cully, NW cor. NE NW, Section 12-10-9. The sands are at 3,003-3,030 feet and at 3,097-3,115 feet. Stinson, Mathews and others are delayed with their well on the Bruner farm, NE cor. SW, Section 21-10-9, because of collapsed 6-inch casing. The total depth is 3,166 feet.

In the North Billings field, Noble County, the Comar Oil Co. has passed up a showing estimated at about 1,000 bbls. a day from the upper sand at 2,089-2,101 feet in No. 3 Carmichael, CWL SW NE, Section 3-24-1w, and is drilling ahead for the deep sand.

Five more wells were completed in the Robberson Pool, Garvin County. Davis & Younger's No. 2 Peters, SE cor. NE SE, Section 14-1n-3w, is good for 20 bbls. a day from a total depth of 1,725 feet. The Magnolia Petroleum Co.'s No. 1 Newberry, NE cor. SW SE, Section 14-1n-3w, is a 10-bbl. well from 1,478-1,513 feet. The same company's No. 4 Mauldin, SE cor. NW NW, Section 15-1n-3w, started at 40 bbls. from a total depth of 1,500 feet. The same company's No. 6 on the lease, CS half NW NW, is flowing 60 bbls. a day from a total depth of 1,452 feet. The same company's No. 3 Harris, CWL NW NW, is a 100-bbl. well from 1,532 feet. It is in Section 16-1n-3w.

Creek County developed several more interesting completions. The Oklahoma Central Oil Co. has a well in the NE cor. SE, Section 10-14-8, which is making 65 bbls. a day in its present state. In the same section the Cosden Oil & Gas Co.'s No. 5 Bear, SE cor. NE, is good for 100 bbls. a day. The Tibbons' test in Section 1-15-8, NW cor. SW SW, which got a hole full of water in the Dutcher sand, failing to extend the pool east, will be plugged instead of being drilled to the Wilcox sand, as was at first intended. The Invader Oil & Refining Co. failed to get production in the Dutcher sand and has a hole full of water at 3,260 feet in the SE cor. NW, Section 24-15-8.

Renewed interest in the Brock district, Carter County, Oklahoma, was brought about by the finding of a new deep producing sand yielding crude said to test 40 gravity by the Amerada Petroleum Corporation on the Johnnie Baptiste farm, northeast of the northeast of Section 29-5s-1e, a quarter of a mile south of production. At 3 feet in the pay, found at 2,128 feet, the well was reported flowing at the rate of 175 bbls. daily.

## LOCO POOL EXTENDED

Loco, Okla., Sept. 6.—The Huntley Syndicate, of Pittsburgh, Pa., has extended the Loco Pool 1½ miles to the north and proved up an area between this pool and that 6 miles north and northwest by completing a well at 1,000 feet, in Section 10-3s-5w. The well is making 15 to 18 bbls. of oil that is reported to be of a higher gravity than the Loco Pool. W.F.K.

## LATE GULF COAST NEWS FEATURES WILDCAT DRILLING

HOUSTON, Tex., Sept. 4.—Czareaux & Martin's No. 1 Katter on the south side of the Humble Pool is a failure at 2,200 feet. Branes and others' No. 1 Kuddo, there, is idle at 1,100 feet. Jessen and others are drilling No. 1 Connor at 2,100 feet. The Thomas Oil Co. is drilling No. 2 Bender on the northwest side of the pool.

At Hockley Dome in Harris County, the Gulf Production Co.'s No. 18, on the Warren ranch on the east side of the dome, is drilling at 876 feet. The Texas Exploration Co.'s No. 5 Warren, on the west side is below 4,200 feet, and No. 7 Warren around 735 feet.

The Gulf Production Co. abandoned No. 5 Cain on the east side of the Pierce Junction Pool at 4,200 feet.

In McMullen County, the San-Balto Oil Co. is setting 12-inch casing in No. 1 on the Moore ranch on the south side of the Nueeces River at 1,525 feet. It will be a deep hole. The Snapp Co. is bailing No. 2 Artex. The Pioneer Oil & Gas Co. is rigging for a deep test in No. 2 Low, on the south side of the river.

The Diamond S. Oil Co. got water in No. 1, 6 miles south of Alice, Jim Hogg County, and will shoot the casing and plug back to 3,425 feet to test a sand passed up at that depth.

In Valverde County, the Havalein Oil Co. is casing off water in No. 1 Weathersbee at 1,120 feet. The Huber Oil Co. is below 1,200 feet in No. 1 Harrison and the Fensland Oil Co.'s No. 1 Rose is drilling at 1,014 feet. Miller and others' No. 1 is at 365 feet.

In Maverick County, the Eagle Pass Oil & Gas Co.'s No. 3 is bailing at 725 feet, with No. 1 drilling below 2,810 feet, and No. 2 being cleaned out to deepen from 850 feet.

In Gonzales County, the Pioneer Oil & Gas Co.'s No. 1 Patterson, north of Smiley, is drilling at 1,100 feet. The Carroll Oil & Gas Co. has started No. 1 Hamon, 10 miles south of Gonzales, and the Wade Drilling Co. has a location near Cost, 8 miles south of Gonzales.

In Walker County, the Lancaster interests have a hole at 3,060 feet in No. 1 Eastham state farm. Within the penitentiary grounds at Huntsville a test is drilling at 3,200 feet. A number of convict farms are located in that county, on which tests are drilling. Currie and others are below 2,110 feet on the Fergus convict farm. The Texas City Oil & Developing Co.'s No. 1, located 2 miles north of that port, on Galveston Bay, is drilling at 745 feet.

In Anderson County, the Winans Oil Co. abandoned No. 1 and is now drilling No. 2 at 918 feet. The Roeser Oil Co.'s No. 1 at Montalba Dome is at 4,000 feet and idle waiting on casing.

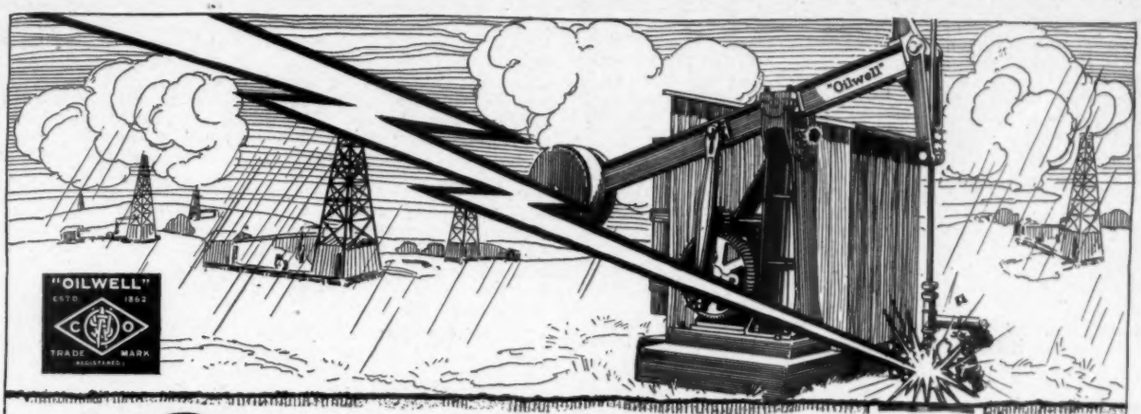
The Halvey-Wilson Oil Co. is drilling a shallow test in the northern part of Angelina County, and Jennings and others have one in the southern part of Nacogdoches County. The Harriss Petroleum Co.'s No. 2, southwest of Brenham, Washington County, is below 180 feet.

The Carnahan Oil Co. is erecting two 5,000-bbl. steel tanks at Mirando City to store its production in the Schott district, Webb County.

John Deering and others' No. 1, Harris County, is drilling around 3,700 feet, and Simms & Co.'s No. 1 Thompson Lumber Co., 4 miles west of Trinity, is in rock at 2,610 feet, and making but a few feet a day. P. L. M.

## GAS CO. SHOWS DEFICIT

DALLAS, Tex., Sept. 1.—The Dallas Gas Co., which supplies gas for domestic and industrial use in this city, showed a deficit of $1,781 during the month of July, according to a report just announced. The gross earnings of the company were $98,966 and operating expenses $100,747. The situation is explained as being due to the small amount of gas used by housewives during the summer months.




# Stopped!

THE tubing may be unscrewed in trying to screw parted rods together; improperly latched elevators may let tubing drop; worn or crystallized tubing may part; wind, fire, or even lightning may destroy the outfit—from these or a hundred other causes, the tubing falls. Down! It will pile into a twisted mass. Ruined tubing, hard work to get it out—time and money thrown away.

**But** if there is a Guiberson-Richard Tubing Catcher in use, the story has a different ending. The tubing starts to fall—and then it stops! and the average drop before it halts is only **three** inches!

It works this way: The gravity pull upon all parts of the tubing catcher is equal, but the spring slows up the weight above it, which comes in contact with the ring to which the slips are fastened, driving them up an inclined slide and outward, so that they wedge with the well casing or wall. Both catcher and tubing come to an instant halt. Drop—three inches!

The average cost is $90 each. Savings vary from $1,200 to $25,000!

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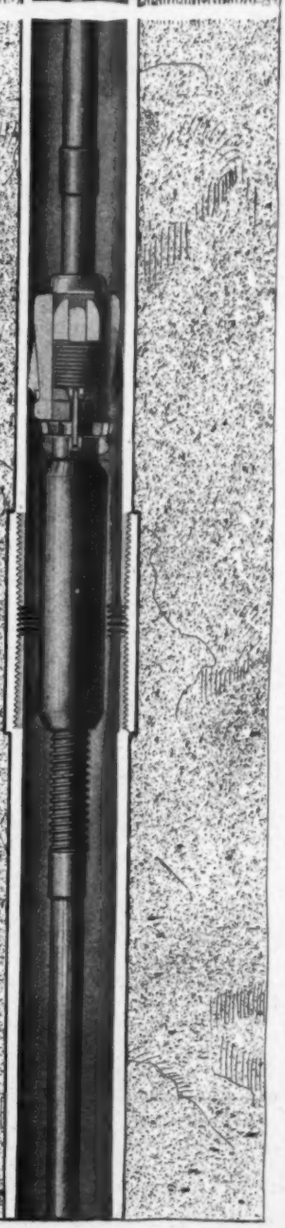


**OILWELL SUPPLY CO**
*World's Largest Manufacturers of Oil Field Equipment*

# Pure Oil Co.'s Marcus Hook Refinery

(Continued from Page 56.)

part of its operations now occupy an adjacent building 45 by 65 feet, formerly used as a grease works.

Offices of the Marcus Hook plant occupy a two-story brick building on the north side of Second Street, across from the filled area approaching the dock. This building is 35 feet square and is headquarters of Plant Superintendent S. G. Robertson. Adjoining the office building is a similar building, occupied by the plant laboratories. Back of this is a bleacher house 40 by 65 feet, and beyond that a large number of tanks of various capacities for refined products. A 200-foot loading rack along another track of the Philadelphia & Reading Railroad parallels these facilities.

### Two Distinct Refineries

About 400 feet west of the office building is the lower refinery, so-called because there are really two distinct refineries of the company at this plant, the other being designated as the hill refinery and being located approximately 1,000 feet north of the lower plant and on a higher ground level. Pennsylvania crudes are handled in the lower refinery. This has 10 crude stills, each one of which is of the horizontal type, 14 feet in diameter by 40 feet long. A siding of the Philadelphia & Reading Railroad runs alongside of the refinery, bringing the coal supplies to the very door of the furnaces. A building 50 by 75 feet, north of the stills, houses the boilers, of which there are four, ranging from 100 to 450 horse-power. The plant is equipped with ash conveyors and elevator and has a fuel economizer. A fan house has blower equipment for forcing drafts to both boilers and stills. The refinery has the complete facilities of condensers and receiving house. Southeast of the refinery is a fully equipped machine for taking care of all plant repairs. East of the refinery there are 36 tanks of various capacities for all purposes.

Beyond this tankage, to the east, is a battery of three steam stills, two of which are 12½ feet in diameter and 40 feet long, and the other 14 feet in diameter and 40 feet long. The treating department is adjacent to the steam stills and has eight agitators varying in size from 12 by 17 feet 6 inches to 25 by 22 feet 2 inches. A filtering department has its own building north of the lower refinery and is equipped with 16 filters, each 6 feet in diameter and 12½ feet high, with rotary kiln, conveyors and cooler complete. There is a tank house and pump house adjoining and a clay-burning plant is near by.

About half way between the lower refinery and the hill refinery is the wax plant, having every modern facility, occupying a building 75 feet wide by 225 feet long. This is a comparatively new plant, modern in every detail of equipment and installation, including receivers, pumps, generators, chilling machines, eight presses, analyzers, with brine tanks and anahydros coolers.

The press rooms are equipped with 42-inch troughs. Aprons under the presses catch the pressed oil leading it to the movable trough underneath, which it presses into concrete underground tanks adjoining the whites building. When the pressed oil has been removed, a lever moves the trough under the apron and the press is knocked down, the scale dropping into lower aprons and trough, out of which receptacle it is moved by the worm.

In the roof of the plant are located the most modern complete ammonia condensers. A conduit provides for lines running to the wax plant receiving and storage tanks.

North of the wax plant is the hill refinery, which is comprised of 10 fire stills, with condensers, receiving house, two boilers, each 440 horse-power, fans and engines for forced draft and fuel economizer. It is in this plant that western crudes have been run and, more recently, Mexia crudes. A coal conveyor, some 175 feet in length, facilitates firing at this refinery, the coal being applied from a coal tower at the west end of the plant. A siding of the Pennsylvania Railroad, which crosses the entire property, runs in here after paralleling the wax plant.

On a hill back of the upper refinery are the foam tanks and pumps that protect all the tanks against fire. Most of the large tanks on the property are directly connected with this system and there are hydrants or outlets where connections can be made in case of fire on any part of the property.

### Storage Facilities

In the area north and east of the hill refinery there are seven 55,000-bbl. steel storage tanks, one 30,000-bbl. steel storage tank and five 15,000-bbl. steel storage tanks. This part of the property is bounded on the north by the Post road, north of which is the terminus and storage of the United States Pipe Line Co., which is controlled by Pure Oil. This covers an area of approximately 40 acres with tankage here including three 55,000-bbl. steel storage tanks and six 40 000-bbl. steel storage tanks. Property is equipped with a pump station and there are garages and sheds for other equipment. Over the entire Marcus Hook refinery, of all descriptions and for all purposes, not including agitators, stills, filters or other specially mentioned containers, there are 307 tanks with a total capacity of 38,392,000 gallons. There are, of all descriptions, approximately 360 pumps and engines. The total still capacity is approximately 1,000 000 gallons and of the agitators 342,000 gallons; filters, 42,000 gallons; ovens, 57,000 gallons; steam stills, 117,000 gallons; presses, 10,000 gallons. The wax plant has a capacity of 15,000 bbls. a day.

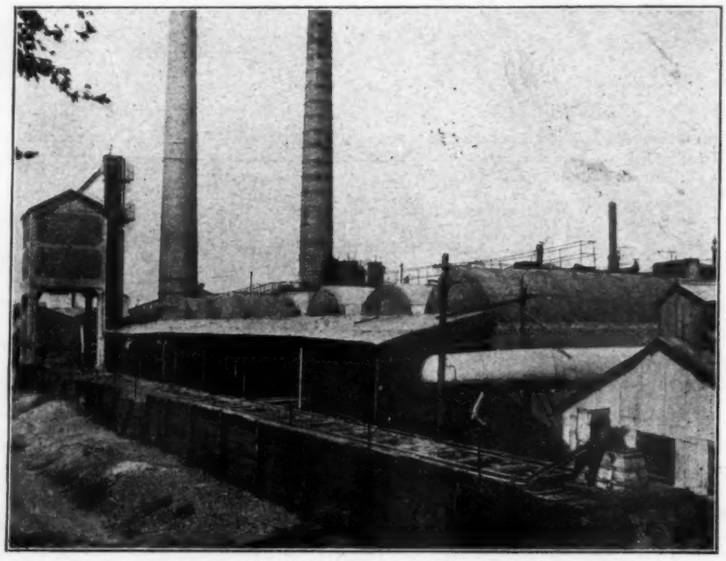
Marcus Hook refinery uses for fuel bituminous coal exclusively, consuming on an average of 4,500 tons monthly.

On the east side of the plant between sidings of the Pennsylvania and Philadelphia & Reading railroads, the company ordinarily carries a large reserve supply of coal. Four miles northwest of this property is a tank farm of the Pure Oil Co. covering 290 acres and known as the Hance tank farm. Company has 15 55.000-bbl. steel tanks for storage on this farm and a sufficient area to allow the construction of 35 to 40 more. The land was selected first with a view of sufficient altitude to insure oil running from the storage tanks to the refinery by gravity; second, with a view of having it in close proximity to the 6-inch pipe line owned by Pure Oil Pipe Line Co. Both of these conditions are met in the Hance farm, which has an altitude 320 feet higher than a refinery and allows the flow of oil by gravity from the tank farm to the plant.

Six and eight-inch lines from the refinery to the tank farm facilitate the handling of crude oil and in addition make it possible to use available storage at the tank farm for fuel oil, whenever the conditions make such storage appear profitable. The importance of the Marcus Hook plant with relation to the marketing operations of the Pure Oil Co. are indicated by the fact that the major portion of the supplies sold in the New York City district are furnished by Marcus Hook.

### Sixteen Distributing Plants

The Pure Oil Co. has 16 distributing plants variously located in the Greater New York district. A large proportion of the supplies for this marketing system is moved by tank barges from Marcus Hook to a central plant located on the Passaic River at Kearney, N. J. There is a large tank and warehouse storage capacity here and a large fleet of motor tank trucks is operated from this point in addition to two barges in harbor delivery service.



Pennsylvania crude stills, showing trestle and ash hopper.

Growth in the export business in the Pure Oil Co., due to new organizations developed in Belgium, Holland, Germany and Spain, in addition to older European sales agencies of the company, have greatly increased their foreign shipping of petroleum products. For some months past, the company has been loading for export at the rate of a cargo every three days.

With changing location of crude oil production and its relationship to the markets of the world, Marcus Hook is proving the incomparable strategic advantages of its location.

## STARTS BUILDING TANKS

CASPER, Wyo., Sept. 1.—The Chicago Bridge & Iron Works has started construction work on its tank program for the Midwest Refining Co., which calls for the erection of forty-five 80,000-bbl. tanks. The company has a force of over 100 men at work. It is expected that the first tank will be completed about the middle of the month and that he remainder will be completed at the rate of one every week or 10 days, provided shipments of materials are not held up.

# *Oil Movement in the Port of New Orleans*

By W. H. REED, JR.

NEW ORLEANS, La., Sept. 4.—After taking a fierce slump the middle of August exports suddenly came to life again and the month was completed with a much better showing than was expected. Forty cargoes were handled at this port during the month, 23 being imports from the Mexican Field and the other 17 exports, a few of which were coastwise shipments of crude and distillate.

Compared to July's record, August shows a general falling off in business, both in the matter of exports and imports. Sixty tankers were handled during July, compared to August's total of 40.

Of special interest is the relation of exports to imports. In July 28 cargoes were exported, compared to 17 for August, while imports in July totaled 32 tankers, compared to 23 for the past month.

At this writing several cargoes are being loaded for export, and at the same time at least four tankers are in the river discharging Mexican crude at various refineries along the river.

Oil men declare that the situation is improving, but has not returned to normal. Of considerable interest is the fact that the usual number of small exports have been missing. It appears to be the idea among purchasing agents of exporting concerns that they should hold off buying until forced to supply current orders. Some officials believe another cut in crude is due within a few weeks. Others declare the market will remain stable for some time. The more optimistic look for price advances.

Records for the two months, in exports are as follows:

July.—Gasoline, 10,997,010 gallons; naphtha, 8,638,226 gallons; distillate, 6,050,000 gallons; crude, 24,374,023 gallons.

August.—Gasoline, 19,672061 gallons; naphtha, 2,900,776; distillate, none; crude, 32,672,061.

Imports for August totaled 946,191 bbls., against 1,746,553 bbls. in July.

Imports during the past week are as follows:

August 28.—66,000 bbls. crude from Tampico to Huasteca Petroleum Corporation.

August 28.—66,000 bbls. crude from Tampico to Huasteca Petroleum Corporation.

August 28.—15,000 bbls. crude from Tampico to Huasteca Petroleum Corporation.

August 28.—15,000 bbls. crude from Tampico to Huasteca Petroleum Corporation.

August 29.—35,000 bbls. crude from Tampico to National Petroleum Corporation.

Exports for the past seven days:

August 25.—To Antwrep, 799,325 gallons naphtha, and 2,744,020 gallons gasoline.

August 25.—To Havana, 2,178,397 gallons gasoline.

August 25.—To Charleston, 4,620,000 gallons crude.

August 28.—To Rouen, 3,500 tons gasoline.

August 29.—To Spanish ports (Gigen), 63,953 gallons gasoline, and 216 gallons naphtha; (Satnoder) 220,343 gallons gasoline, and 243,689 gallons naphtha; (Bilboa), 250,595 gallons gasoline; (Passages), 249,720 gallons gasoline, and 243,217 gallons naphtha.

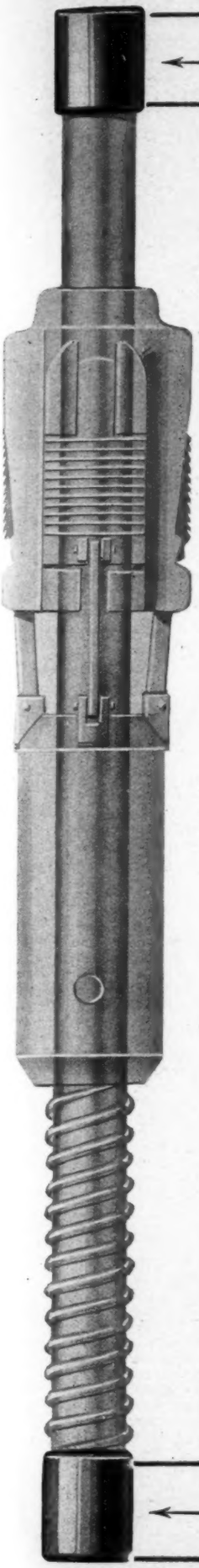
August 29.—To Barrow, 2,300,000 gallons naphtha.

August 29.—To Bayonne, 3,150,000 gallons pressed distillate.

August 29.—To New York, 4,620,000 gallons crude.

## GASOLINE PLANT COMPLETED

TAFT, Calif., Sept. 1.—The gasoline plant of the Lovell Gasoline Co. has been completed and is now ready to start operating.




## ←— *Harrisburg Forged Seamless Steel Coupling!*

# GUIBERSON USE Harrisburg Couplings

*Exclusively on their tubing catchers, for the same reason they build the catcher around a continuous length of tubing*

They want this catcher to have a record of DEPENDABILITY!

If a coupling in a string of tubing lets go, Guiberson do not want it to be the coupling furnished with their equipment. They want the coupling to be as strong and dependable as the catcher—therefore, they use Harrisburg Couplings on all Guiberson-Richard Tubing Catchers.

It is simply a matter of a quality product seeking the best accessory it can find to help maintain the product's reputation.

Harrisburg Forged Seamless Steel Couplings are better couplings because—

1. They are seamless
2. They have double strength.
3. They will not gall or strip.
4. They will not go out of shape.
5. They are uniform throughout.
6. They are concentric, with perfect thread and taper from the outer ends of thread to the center.

Oil men have come to realize that the Harrisburg Forged Seamless method of handling special oil field steel produces the best coupling for any purpose.

**Harrisburg Pipe and Pipe Bending Co.**
Harrisburg, Pa.

Sold By
**Harrisburg Pipe & Pipe Bending Co., Inc.**
Houston, Texas

## ←— *Harrisburg Forged Seamless Steel Coupling!*

# OUTPUT OF REFINERIES IN THE UNITED STATES FOR JUNE, 1922

(Compiled by H. J. Lowe, Petroleum Economist of the Bureau of Mines)

| 1922— | East Coast (N. Y., Phila. and Balto.) | Pa., N. Y. East Ohio and W.Va. | W.Ohio, Ind. Ill., Ky. and Tenn. | Oklahoma and Kansas | Texas | Louisiana and Arkansas | Colorado and Wyoming | California | Total | Daily Average 1922 | Daily Average 1921 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Crude run (barrels) | 8,015,467 | 1,736,818 | 3,791,862 | 6,252,596 | 8,502,193 | 3,026,844 | 2,083,432 | 8,395,431 | 41,804,633 | 1,393,488 | 1,231,361 |
| Oils purchased and re-run (barrels) | 725,176 | 182,211 | 474,923 | 618,560 | 439,871 | 271,641 | 1,142,275 | 756,981 | 4,611,638 | 153,721 | 91,338 |
| Gasoline (gallons) | 88,707,955 | 25,712,896 | 75,813,918 | 106,657,211 | 87,938,658 | 36,743,927 | 49,404,666 | 54,961,369 | 525,940,600 | 17,531,353 | 14,344,813 |
| Kerosene (gallons) | 35,248,166 | 12,548,899 | 16,283,957 | 27,149,970 | 43,304,298 | 12,728,248 | 8,672,739 | 17,713,315 | 173,649,592 | 5,788,320 | 4,721,236 |
| Gas and Fuel (gallons) | 165,124,178 | 17,707,873 | 57,401,617 | 119,925,988 | 189,975,519 | 63,415,476 | 39,678,210 | 249,827,717 | 903,056,578 | 30,101,886 | 27,646,175 |
| Lubricating (gallons) | 23,649,650 | 14,315,489 | 5,652,213 | 5,702,691 | 20,055,458 | 2,476,191 | 1,941,125 | 6,345,440 | 80,138,257 | 2,671,275 | 2,102,953 |
| Wax (pounds) | 23,655,291 | 6,420,293 | 2,039,552 | 2,269,535 | 8,362,638 | 4,066,401 | 2,865,933 | ..... | 46,669,742 | 1,555,658 | 996,343 |
| Coke (tons) | 18,589 | 1,906 | 12,702 | 1,818 | 6,941 | 7,276 | 4,019 | ..... | 53,251 | 1,775 | 1,452 |
| Asphalt (tons) | 88,216 | 742 | 5,626 | ..... | 40,848 | 24,612 | ..... | 24,752 | 187,795 | 6,260 | 3,652 |
| Miscellaneous (gallons) | 10,639,372 | 3,465,279 | 10,810,228 | 18,209,758 | 10,969,942 | 8,568,879 | 30,432,253 | 43,527,288 | 136,622,999 | 4,554,100 | 3,334,982 |
| Losses (barrels) | 397,190 | 127,116 | 179,692 | 223,601 | 368,196 | 66,932 | 86,957 | 148,019 | 1,597,703 | 53,257 | 51,537 |

**STOCKS ON HAND AT THE REFINERIES, JUNE 30, 1922**

| 1922— | East Coast (N. Y., Phila and Balto.) | Pa., N. Y. East Ohio and W.Va. | W.Ohio, Ind. Ill., Ky. and Tenn. | Oklahoma and Kansas | Texas | Louisiana and Arkansas | Colorado and Wyoming | California | To'l Stocks End of May 1922 | To'l Stocks End of May 1921 |
|---|---|---|---|---|---|---|---|---|---|---|
| Crude Oil (barrels) | 11,637,254 | 1,115,053 | 911,369 | 2,471,237 | 9,402,755 | 6,475,170 | 2,543,630 | 1,621,850 | 36,178,308 | 21,008,986 |
| Oils purchased to be re-run (barrels) | 165,720 | 43,748 | 223,163 | 69,335 | ..... | 13,191 | 162,700 | 196,057 | 867,914 | 800,561 |
| Gasoline (gallons) | 188,070,833 | 23,202,300 | 128,996,992 | 130,557,976 | 109,690,403 | 57,093,172 | 128,893,238 | 48,441,542 | 824,966,456 | 750,644,450 |
| Kerosene (gallons) | 79,983,755 | 13,148,442 | 34,871,683 | 41,241,863 | 32,452,063 | 20,721,673 | 6,391,683 | 28,763,302 | 317,574,464 | 435,056,713 |
| Gas and Fuel (gallons) | 319,865,440 | 27,479,144 | 45,582,833 | 167,865,613 | 303,640,436 | 162,470,054 | 27,963,953 | 272,132,189 | 1,326,939,662 | 1,248,664,088 |
| Lubricating (gallons) | 87,787,172 | 38,538,991 | 23,955,043 | 17,044,316 | 42,586,681 | 3,100,776 | 1,981,092 | 11,909,741 | 226,903,812 | 260,883,121 |
| Wax (pounds) | 84,210,389 | 27,021,338 | 27,883,417 | 6,246,343 | 15,418,406 | 70,291,650 | 1,063,685 | ..... | 232,135,228 | 261,328,486 |
| Coke (tons) | 33,439 | 791 | 22,611 | 3,905 | 8,278 | ..... | 9,288 | ..... | 78,312 | 66,710 |
| Asphalt (tons) | 96,395 | 5,261 | 6,333 | 189 | 9,633 | 23,343 | ..... | 13,526 | 154,680 | 132,604 |
| Miscellaneous (gallons) | 170,894,099 | 25,980,738 | 65,436,966 | 80,529,570 | 218,494,689 | 89,283,248 | 62,401,538 | 170,938,918 | 883,959,766 | 748,787,601 |

**COMPARATIVE ANALYSIS OF PRODUCTION AND CONSUMPTION FOR THE FIRST HALF OF 1919, 1920, 1921 AND 1922**

(Unit of gallon)

| | GASOLINE | | | | KEROSENE | | | |
|---|---|---|---|---|---|---|---|---|
| INCOME— | 1922 | 1921 | 1920 | 1919 | 1922 | 1921 | 1920 | 1919 |
| Stocks, January 1 | 586,087,132 | 462,581,837 | 446,793,431 | 297,326,983 | 341,008,555 | 393,070,923 | 339,319,690 | 380,117,829 |
| Production | 2,827,643,547 | 2,573,543,547 | 2,178,281,185 | 1,911,152,705 | 1,055,206,184 | 980,723,092 | 1,120,517,007 | 1,045,746,955 |
| Imports | 44,238,961 | 14,835,056 | 21,686,348 | 6,782,925 | ..... | ..... | ..... | ..... |
| Total | 3,457,969,640 | 3,050,760,440 | 2,646,760,964 | 2,215,262,613 | 1,396,214,739 | 1,373,794,015 | 1,459,836,697 | 1,425,864,784 |
| OUTGO— | | | | | | | | |
| Exports | 307,220,395 | 286,564,512 | 286,657,962 | 177,798,652 | 439,671,413 | 380,128,998 | 419,111,094 | 475,290,524 |
| Shipments to insular possessions | 7,780,570 | 14,861,489 | 10,270,476 | 9,727,264 | 10,073,180 | 8,988,484 | 6,317,905 | 10,122,293 |
| Domestic consumption | 2,318,002,219 | 1,998,689,989 | 1,845,776,925 | 1,433,840,087 | 628,895,682 | 549,619,820 | 613,064,345 | 687,909,533 |
| Stocks, June 30 | 824,966,456 | 750,644,450 | 504,055,601 | 593,896,610 | 317,574,464 | 435,056,713 | 421,343,353 | 252,542,434 |
| Total | 3,457,969,640 | 3,050,760,440 | 2,646,760,964 | 2,215,262,613 | 1,396,214,739 | 1,373,794,015 | 1,459,836,697 | 1,425,864,784 |

| | GAS AND FUEL | | | | LUBRICATING | | | |
|---|---|---|---|---|---|---|---|---|
| INCOME— | 1922 | 1921 | 1920 | 1919 | 1922 | 1921 | 1920 | 1919 |
| Stocks, January 1 | 1,331,265,439 | 837,404,414 | 714,124,455 | 659,001,357 | 240,863,516 | 160,522,477 | 137,318,934 | 138,853,574 |
| Production | 5,099,743,407 | 4,784,728,190 | 3,934,351,177 | 3,591,438,916 | 449,760,271 | 440,889,925 | 501,726,377 | 409,904,213 |
| Total | 6,431,008,846 | 5,622,132,604 | 4,648,475,632 | 4,250,440,273 | 690,623,787 | 601,412,402 | 639,044,311 | 548,757,787 |
| OUTGO— | | | | | | | | |
| Exports | *944,411,817 | 991,237,743 | 851,637,772 | 507,347,261 | 189,931,273 | 135,782,285 | 206,915,840 | 147,695,436 |
| Shipments to insular possessions | 50,717,868 | 63,474,802 | 56,317,919 | 58,323,457 | 1,241,671 | 2,795,367 | 2,350,116 | 1,364,544 |
| Domestic consumption | 4,108,939,559 | 3,318,755,971 | 3,098,551,578 | 2,872,978,918 | 272,547,031 | 201,951,629 | 296,565,804 | 224,313,032 |
| Stocks, June 30 | 1,326,939,662 | 1,248,664,088 | 642,968,363 | 811,790,637 | 226,903,812 | 260,883,121 | 133,212,551 | 175,384,775 |
| Total | 6,431,008,846 | 5,622,132,604 | 4,648,475,632 | 4,250,440,273 | 690,623,787 | 601,412,402 | 639,044,311 | 548,757,787 |

Figures on exports and shipments are taken from reports of the Bureau of Foreign and Domestic Commerce.
*Includes fuel or bunker oil for vessels engaged in foreign trade: 1919—5,053,957 bbls.; 1920—10,874,918 bbls.; 1921—13,397,198 bbls.; 1922—15,140,973 bbls.

# UNION BUYS 20,000,000 GALLONS OF KEROSENE, SOME OF IT IN TEXAS

**By Staff Correspondent**

FORT WORTH, Tex., Sept. 5.—Overshadowing in importance every other event of the week in the north Texas refined oil market are the heavy export purchases of the Union Petroleum Co., which totaled, roughly, 20,000,000 gallons of kerosene, several hundred cars of 64-66, and a relatively small amount of New Navy gasoline.

While north Texas refiners shared to a certain extent in all of the Union's large order, much of this business went to plants in the north Louisiana district, and at least two cargoes of kerosene were purchased from Gulf Coastal refineries. The latter action, which constitutes a radical departure from the Union's formery policy, was necessitated by their inability to secure a sufficient quantity of kerosene in the other territories at a price which would enable them to meet competition and get the business. The price paid for the kerosene which is a Prime White grade is reliably understood to have been 3¼ cents, which is the same price the Union is known to be receiving from its foreign customers.

The angle of the Union's purchase, which lifts it out of the ordinary and in the opinion of close observers of marketing conditions, makes it one of the most significant transactions of the year, is its deviation from its former purchasing policy, that is, its invasion of the Gulf Coastal area. Heretofore, this company has always confined its buying to what is commonly referred to industrially as the Mid-Continent Field refineries, that is, the independent refineries of Kansas, Oklahoma, North Louisiana and Arkansas.

The fact that it has now found it necessary to enter the Gulf Coastal regions and do business with the big refiners of that territory, is furnishing students of trade considerable food for thought. It is common knowledge that when the Union entered the market some two weeks ago for export kerosene, it went to great pains to explain to refiners in this and other territories the necessity of their securing this kerosene on a basis which would enable them to meet the competitive conditions obtaining in Europe. In fact, the Union, which is known to be taking on this business at a price which leaves no margin of profit, simply to hold the customer, in some instances went to the length of showing the refiners the actual cables confirming the price at which it was undertaken so that there would be no chance of anyone misunderstanding the situation.

Despite all of this, however, the Union coming into the market at an especially unpropitious time, due to the strength of the domestic demand for kerosene, found themselves unable to interest many refiners in taking on any of this business, which is understood to call for delivery over the next 60 days. Other refiners, however, were persuaded through combination purchases, which in addition to the Prime White kerosene, included some New Navy that the Union is understood to have taken purely as accomodation as it is known to have large stocks of this product in its Westwego terminal, with little demand in sight, to sell enough burning oils to practically deplete all of the larger stocks of the North Texas area. This volume of kerosene, though, coupled with that obtained from the North Louisiana district was not sufficiently large to cover the Union's commitments, consequently they were forced to turn to the Gulf Coastal region.

While some refiners believe that the Union's entry into this area presages a permanent change in policy, such a view is not held by the better posted type. The latter believe that the Union only purchased in that territory, due to the particular exigencies of the case, and that once this company and refiners are able to coordinate their prices, it will discontinue its purchases in that territory.

There is very little change in the North Texas refined oil situation over last week, in so far as prices are concerned, although there is a tendency to a further weakness in all products with the exception of kerosene. The demand is very quiet from the jobbing trade, which naturally tends to force prices downward.

The general tank car situation is somewhat better than it has been for several weeks, and most refiners in this section, while they cannot be said to have any surplus equipment, have enough cars on hand to take care of their current orders. Of course the switching service at a number of points is still very poor, but taking transportation in north Texas as a whole, conditions are much better than those prevailing a week or so ago.

### Gasoline Demand Quiet

The demand for ordinary grades of domestic gasoline seems rather quiet at present, there being few inquiries or sales. This condition is doubtless the result of uncertainty as to market conditions and an expectation on the part of some buyers of reduction in tank wagon market. Then, too, with shipments moving as slowly as they are, the average jobber prefers covering his requirements as close to the point of distribution as possible, in order to prevent the probability of a reduction in price, while his supplies are in transit.

Although practically all of the heavy stocks of gasoline have been worked off, nearly every refiner has sufficient material on hand to take care of his current orders and could take care of his customers at the rate orders are now coming in for a couple of weeks even if he shut his plant down. Exporters have been buying quite a little high gravity gasoline, but so far, with the exception of a few cars bought in connection with kerosene, are showing very little interest in New Navy.

The car situation seems to be more acute just now with the natural gasoline manufacturer than it is with the average refiner as nearly every one of the former reports trouble in finding sufficient equipment to move his daily output. As a consequence, prices are remaining pretty firm and shipments are hard to secure with any degree of promptness. Long time contracts and a good current movement up to date have kept stocks of natural gasoline in a very healthy condition, so they are not troublesome except at one or two of the larger plants.

Due to the quiet straight run gasoline demand, blends are moving slowly and there is not much active manufacture. As a result, refiners are having difficulty in moving their blending naphtha. The high gravity gasoline being cut at present is resulting in an accumulation of naphtha, which will mean that sales managers having this product to dispose of will have to look for markets away from their immediate vicinity to take care of the surplus.

During the time when equipment was short, refiners he'd off shipping kerosene, preferring to utilize their cars for gasoline. This naturally caused burning oils to advance slightly in price. Since tank cars have become more plentiful and the price more attractive, most refiners are selling and keeping this product moving.

### Fuel Oil Movement Light

With gas oil bringing practically the same price as fuel oil, few refiners care to bother with the manufacture of this product. The result is there is not much being made and only a small quantity in storage. The demand is light with little indication of improvement unless something unforseen occurs.

(Continued on Page 80.)

# Marland Motor Oils

## *Get and hold the business!*

When you sell a customer oils, you want to sell him *lubricants*—you want him to stay sold—you want him to keep on coming back for more—don't you? All right—sell your trade genuine MARLAND OILS, in Marland cans and drums, and note the *repeat* business.

MARLAND OILS are steam distilled from choice light gravity paraffin base crude. They have the heat resisting quality, and the viscosity. They get and hold business — because they *really lubricate*, economically. MARLAND OILS are building business right now for other good oil jobbers. They will build *your* business.

Write or wire us today for samples, specifications and prices of Marland Motor Oils, Marland Tractor Oils or Marland Bright Stock.

**MARLAND REFINING COMPANY**

**General Offices and Refineries: PONCA CITY, OKLA.**

**DIVISION OFFICES:**

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**MARLAND BRIGHT STOCK**

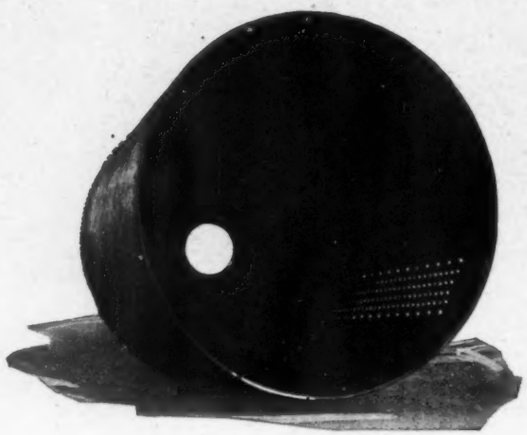
—a special grade of unusual quality. We have the largest centrifugal dewaxing plant in the world, and our own Fuller's Earth mines. Compare Marland Bright Stock with the best you can find elsewhere. Ask for sample.

# MARLAND OILS

*"Carefully Refined from Choice Paraffin Crude"*

No. 23

P.I.W.
STEEL PLATE CONSTRUCTION



Inside and Out—
Its P. I. W. Quality

The above view shows a section of one of twenty High Pressure Gasoline Stills (10 ft. diam. x 30 ft. long) built by "The TANK BUILDERS" for the makers of "Red Crown" gasoline. We always knew that "R. C." was good gas, but now we know why—if its requirements are as exacting as those set by its makers for the construction of their Gasoline Pressure Stills.

Note the substantial strength; the six even rows of clean-cut riveting; and the accurate spacing and punching of the circular seams and rivets on the above still—both inside and out.

P. I. W. Workmanship and Quality are **built into** the above still all the way through.

*"It is P. I. W. Service and P. I. W. Service is World Wide"*

THE PETROLEUM IRON WORKS COMPANY
SHARON, PENNSYLVANIA

New York St. Louis Tulsa Houston Denver
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P. I. W. Steel Plate Products Are Used in the Petroleum, Gas, Mining, Railway, Iron and Steel Water-Works, Engineering and Allied Industries

# CHICAGO GASOLINE DEMAND STRONGER

## Tank Car and Transportation Situation Still Bad and Causing Jobbers to Overbuy in Order to Keep Filling Stations Supplied—Kerosene Continues to Strengthen With Prospect of Large Winter Demand—Use of Fuel Oil Increasing.

By J. B. WALDO

CHICAGO, Sept. 4.—When doctors fall out, who gets the verdict? Judge Gary, of the United States Steel Corporation, says that business conditions are good and that we are all set for a period of real prosperity as soon as these strikes are settled. Henry Ford has said that unless he gets coal by September 16, the big Ford plants at Detroit and elsewhere will shut down. It is only a couple of weeks ago that Ford's buyers appeared in Chicago and, before they went back to Detroit, they had purchased a large part of the spot supply of fuel oil. The announcement was made that such parts of the Ford plant as could use fuel oil had been or were being converted so that they could use liquid fuel. Men who are intimate with the plant have said that Ford could operate everything but his smelters on fuel oil, and with oil and coke he would be able to operate indefinitely. There seems to be something back of this decision to close down and the comment that is heard in the oil industry ranges all the way from political aspirations to a plain bluff to the steel companies.

The move of the Ford industries, if carried out, and the receivership for the Alton Railroad would naturally have been assumed to have cast a little gloom over the stock markets, but nothing happened and the sentiment in the stock market seems to be that the receivership was a good thing and that the Ford announcement was just "Henry blowing off steam." The action of the stock market under what might have been knockdown blows is evidence that the Street is assured that prosperity is either here or coming very shortly. It has been stated that Wall Street is one of the best indications of coming conditions in the industrial world. Moody says that, from his lifelong study of financial matters, Wall Street and the stock markets are not prophets but reflections—they show present conditions.

Any improvement in business should be reflected in the petroleum industry. The past season has not been a generally gratifying one, but many oil men believe that we are getting right now a part of the readjustment that was started when crude was cut from $3.50 to $1 a barrel and then put back to $2. These say that if the crude market had been left alone to work out its own salvation and not advanced just before the inventory period, there would have been a steady movement this year, no overproduction of crude or refined products. Regarding the latter, reports are made of large stocks in the refiners' hands in the Mid-Continent Field and in the Northwest that will have to be carried over for a while.

### Fight on for Contracts

The refiners and marketers seem to have abandoned the idea of any unexpected amount of business the remainder of the motoring season, but there is a big fight on for contracts for the coming season of the marginal variety. The individual stories of offers made to this jobber and that jobber by this refiner and that refiner are interesting, but might be out of place in print unless carefully verified. There is no possible doubt that there has been unusual activity shown by some of the largest independent and, may it be said, semi-independent refiners, to line up the jobber with a nice contract that is showing a fine margin.

There is some evidence of a little hard feeling apparent and each takes occasion to let it be known to the trade that he is running his own business in the way that it seems good to him, and he is going to keep his refinery or refineries busy if he has to take a trimming to do it. All of which must be sweet music to the ears of the buyer, but may sound a little like a distant warning of trouble to such refiners as are not in exact fighting trim. Those who seem the worst prepared for the coming year are certainly those who can only skim 25 per cent of the barrel of crude while the refiner with a cracking plant can get his 50 per cent. It makes a lot of difference whether one gets 10½ or 21 gallons of gasoline from the average 42 gallons of crude. Besides the gasoline to sell at a profit, there is the large percentage that must go at a loss.

There has not yet appeared any substitute that promises to usurp the crown from gasoline as a motor fuel and as long as the demand for gasoline keeps on increasing, the supply of other products will grow with the increased volume of oil run so that it is doubly important to the refining industry to get more gasoline from the crude. It means less of the products which most of the past year have sold at less than the cost of the material—that is, the crude from which they were made.

### Demand for Gasoline Increasing

The time is coming when the small railroads will be operated on gasoline as the larger trunk lines will be operated by electricity. Then it will be possible to link up even the most remote hamlet with some main line of transportation for the gasoline rail car does not need any power plant outside of itself and anywhere that light rails can be laid for a roadbed the gasoline car can go. The next step in transportation is the automobile bus, and even the suburban roads are adopting a system of automobile bus feeders and extensions.

On some of the interurban lines, busses are operated from the terminals as a sort of extension, and as the traffic grows, the rails are extended. All that is needed for a bus line is a string of busses and good roads. Inside the city of Chicago, the elevated lines are adding bus connections with parts of the city that are poorly served by the elevated and surface lines and the same ticket pays the entire fare both on the auto bus and on the elevated line with which it connects. All this plan makes for an extremely flexible and adaptable system of transportation which provides for most contingencies and is only possible as yet by the aid of the gasoline motor.

### Car Situation Still Bad

A Northwestern jobber, who was in the city arranging for supplies of gasoline, stated that he had 23 cars on the tracks between his stations and the Mid-Continent Field, but had no idea when he would receive the first one. In the meantime, some of his stations were dry. He succeeded in securing some cars from a nearby plant and shipment was made promptly at a price that was not excessive considering the service. This illustrates the difference between a car on the buyer's track and the car on the track of some Western road. There are a lot of stories around regarding the steps taken to delay shipments. These include cars that are purposely broken, cars that are punctured and made to leak, cars with their journal boxes filled with sand and care that seem to be purposely misrouted.

As to the actual deliveries, some claim that movement is a good deal better and others that it is growing steadily worse. Go into any marketer's office today and

# A total of 52 Cooper Gas Engines.

THE DALLAS MORNING NEWS, MONDAY, MARCH 20, 1922

**More Gas Compressors to Be Installed**

One of the most important announcements which have not been published is the contracting for thirty additional gas compressors by the Lone Star Gas Company a few days ago. These compressors, costing an enormous sum of money, will be installed in fields where we are connected to low pressure areas in order to further increase the supply of natural gas to all the cities and towns of Texas and Oklahoma which we serve through distributing companies.

A gas compressor compacts raw gas into smaller volume, resulting in a higher pressure. Many people have the idea gas is pumped like water, but this is untrue. Another opinion is that air is pumped into gas by compressors, which is an absurd theory. Air can not be held with gas in gas mains because of the highly explosive mixture. Sand and small gravel often get into the gas lines from the wells and cause sparks inside the lines because of traveling rapidly through the mains on account of the high pressure necessary in transmitting gas long distances.

With the compressors we have in the numerous fields and the installation of these additional compressors, we will have necessary machines to transmit a much larger volume of gas than ever before. The next that is necessary is gas wells and pipe lines. We will discuss these tomorrow and the day after.

**Lone Star Gas Company**

American Exchange Building, Dallas

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Dallas Morning Ne

## Lone Star Begins Gas Conservation in The Field

"How much gas per horsepower?" was the question the Lone Star Gas Co. asked when they considered small gas engine compressors. Because the Cooper 80 to 160 H.P. engine was a 4-cycle unit and the most economical of its type, they placed their first order for 10 of them. Experience proved that every detail of the Cooper Engine is just as fundamentally correct as its 4-cycle fuel saving principle.

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you will find a number of empty desks, the usual occupants of which are out in the yards trying to chase cars through. Sometimes they are successful and sometimes not, but they feel that it must be done or all movement would cease.

Jobbers report a fair demand for the season. It is difficult to get any idea of the consumption from the deliveries by refiners for, as in the instance of the jobber mentioned, who had 23 cars rolling and bought 12 more to keep his stations going until the cars shipped could reach him, most buyers have done the same. The jobbers have been obliged to overbuy and when the traffic movement becomes more nearly normal, they are likely to have a surplus. Prices have fluctuated more as a result of rail conditions than of any change in the demand. The higher tests have been firm at a little higher prices as a result of export buying by the Gulf Refining Co. of 60-62 gravity gasoline and kerosene.

**Kerosene Strong**

The market for kerosene has continued to strengthen during the week and buyers are paying as high as 5½ cents for cars where prompt delivery is assured. Very little can be had at less than 5 cents except from Louisiana and Texas, and this is really no cheaper when delivered and is not acceptable to many buyers. The trade feels that there will be a large use of kerosene stoves this winter and are preparing. Offers are not large and some report the commodity rather scarce.

In this connection, the insurance companies are issuing warnings to their agents regarding the use of kerosene for heating purposes and they believe that the number of fire losses will be appreciably increased by the use of kerosene and gas for heating purposes as they argue that people who will resort to these fuels will know nothing of how to properly use them.

Naphtha is not very freely offered, but it is easy to buy if wanted, which is a change in conditions from the past few months. The prices quoted are the same as a week ago, which were decidedly lower than a month ago. The argument is that less is being used for blending.

**Fuel and Gas Oil**

Fuel oil is going fast these days and the deliveries are so improved that the market is down to the price of crude with free offerings at 90 cents by Texas refiners to marketers in this city. The local price seems fixed for the present, at least, at $1.25 and several of the largest dealers are sticking for $1.25, no more and no less, is the way they put it. They believe that, under the conditions, to ask more is bad policy when fairly prompt deliveries can be had and some sellers claim they have been getting cars through from Group 3 in seven days to Chicago and southern Wisconsin. It is easier to get cars through to smaller towns in Wisconsin than to this city as the delays in the yards surrounding Chicago are very exasperating. Some say that it takes as long to get a car placed after it is reported arrived at the Chicago belt lines as it does to get it from Group 3 to the outskirts of Chicago.

There is little new in the demand for fuel oil. The users are finding that it is a substitute that is better than the original and one hears of engineers and managers who state that they will stick to oil as long as they can get it at a reasonable price and forget coal. But this has been heard before. The demand should improve for the steel mills are getting more orders than they can fill under present conditions. The advance in wages for common laborers made by the United States Steel Corporation shows how strong is the demand for their product.

Gas companies have done some buying during the past week and they are finding that stocks are small. Refiners say that as long as they are getting $1.25 for fuel oil and cannot get more than 3½ cents for gas oil, it does not pay them to take the gas oil out of the stills. The gas companies will have to buy and the prices are very strong.

Road oil is wanted badly and is very difficult to get. The season for spreading is drawing to a close and there are yet considerable stretches of road to be covered. Delays in deliveries are the cause for this late demand, and the impossibility of getting cars for all needs is making it difficult to have shipments made.

**Lubricating Oils**

The market continues quiet with a demand largely for small lots as the buyers are facing a period of some uncertainty. It is reported that some fair orders have been placed at some concessions regarding deliveries.

**Tank Wagon Markets**

The Standard Oil Co. of Indiana has announced no changes and there is no intimation that any will be made for a little while, at least. The present selling prices leave a fair spread for the jobber, but the condition is not one to invite price cutting. The pump situation is again acute and the desire to benefit some of the distributors by fine pumps at a nominal cost has been too strong for any agreement. The Standard Oil Co. comes out frankly and says that it is not the beginner and names other companies as having made the start in the practice, but the Standard also says that it is not going to lose customers by any such action and it will go as far as the next.

## UNION BUYS 20,000,000 GALLONS OF KEROSENE

(Continued from Page 76.)

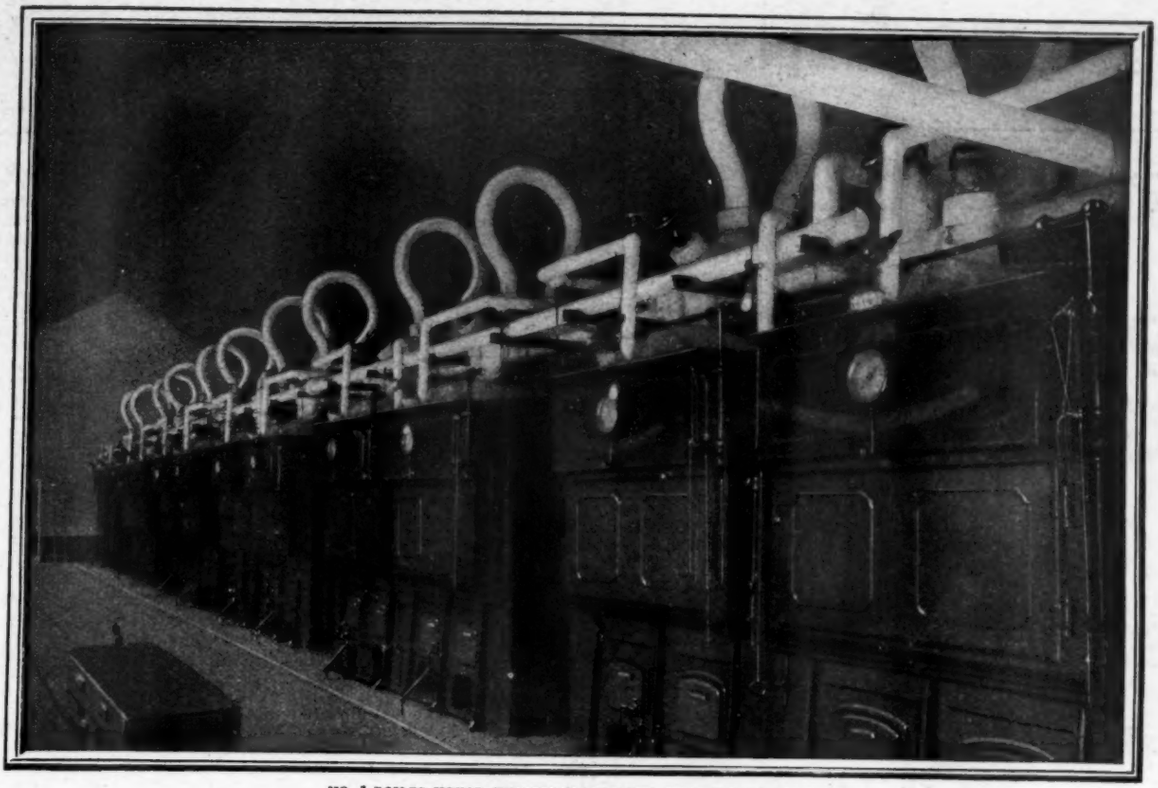
While there have been a few train loads of fuel oil move to the North and East during the past week out of this territory, the movement as a whole has been rather light and sales at current prices limited. Inquiries seem plentiful for both large and small amounts, but the prices the buyers are willing, or are in a position to pay, as a general rule do not coincide with sales managers' ideas and very little actual business is being consummated.

With a freight differential of 30 to 50 cents a barrel in favor of Group 3, and a price differential of only about 25 cents per barrel in favor of north Texas, it is very difficult to move fuel into the Standard of Indiana territory from this district. The same condition prevails in connection with Eastern and Western shipments to a greater or lesser extent. This has served to confine the north Texas refiner to his own trade territory in respect to heavy oils. The largest consumers, such as railroads and public service corporations, are making their regular purchases from time to time, but through improved storage facilities they are in a much better position to remain out of the market when they feel prices are too high than they have been heretofore. Despite this condition, refiners feel they will have no trouble whatever in keeping their fuel oil moving from now on, even though there is considerable fuel oil in storage in this territory.

## AUSTRALIANS TEST METHOD TO DISTILL OIL FROM SHALES

WASHINGTON, D. C., Sept. 4.—A new method for the distillation of oil from shale is being tested at Newnes, New South Wales. In order to reduce the labor necessary in the distillation process certain areas of the shale deposit were sealed off and fired to drive off the volatile contents for distillation and refining.

It is stated in the Trans-Pacific that this experiment exceeded beyond the expectation of anyone and that three days after the shale was fired the oil was flowing so fast that it was difficult to find containers to hold it. It is said that this process will permit the working of inferior shales that otherwise would not be worth handling. It also is proposed to use the huge volume of gas given off in this process. It is said the promoters of this enterprise expect their process will give a great impetus to the shale industry. C.E.K.



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## Drawing on Gasoline Stocks in the East

By N. O. Fanning

New York, Sept. 2.—With the mid-summer demand for gasoline at its height, refiners are having no trouble in getting rid of this product and are now taking it from stock at a rapid rate. To all appearances there will be no shortage this season, however, despite predictions which were made early this year. The Eastern refiners seem to be well supplied and in addition there is considerable gasoline finding its way into the Eastern field by tank car for the Mid-Continent, representing largely the output of the gasoline plants there. The cheapness of this latter is given by the big refiners as the cause of the recent reductions in their tank wagon quotations. For this reason further reductions are talked of, and are foreshadowed, it is believed in some quarters, by the cut of 1 cent put into effect by the Atlantic Refining Co. throughout Pennsylvania.

Refiners are watching the tank wagon market in the territory south of Pennsylvania, believing that if there is a spread in the price-cutting along the Atlantic seaboard it will begin there.

There is an improvement in the demand for lubricants which is one of the most encouraging features of the Eastern refined oil markets. This has been looked for for many months, and coming at a time when crude oil prices are low, it should benefit the refining industry considerably. How the oil refiners will come out as to profits during the latter part of the year may be dependent on the demand for this product, as a heavy consumption of both fuel oil and kerosene during the winter months is confidently expected, and with the demand for lubricants also strong the industry should count 1922 a good year.

The tank wagon market in New York and New England remains at 25 cents per gallon, with 24 cents quoted throughout the State of New Jersey. In bulk, gasoline can be obtained at 19 cents, although some offerings are reported to have come onto the market at a fractionally lower figure.

### Fuel Oil Easier

Bunker fuel oil is still held at $1.45 per bbl. at New York harbor, with a lighterage charge of 6½ cents per bbl. extra. The tendency of fuel oil is slightly downward, although this is believed temporary and is not expected even to result in an actual reduction in price. Mexican crude is now considerably more plentiful, the bringing in of several good-sized wells in the Tuxpam and Panuco areas having relieved the situation there temporarily. Tuxpam crude is said to be obtainable in limited quantities for $1.45 per bbl., f. o. b. Mexican ports, and Panuco crude is quoted at 90 cents at Tampico. The tax rate has increased in accordance with the recent advance in the price of bunker fuel oil here. The tax on Tuxpam crude is now figured at 25.59 cents per bbl., while that on Panuco is 15.10 cents. The price of these crudes at New York, including cost of transportation and all other charges is about $2.06 for Tuxpam and $1.40 for Panuco.

The easiness in fuel oil at present seems incongruous in the face of the shortage of coal, but it must be remembered that conversion from coal to fuel oil on the part of former coal users is not accomplished overnight.

The use of fuel oil in New York City in place of coal is growing rapidly, considering the fact that the movement in reality began only about two years ago. At that time the Singer Building, one of the largest in the world, changed to oil. Now most of the buildings in that class are using oil. At present four large buildings are installing oil burners, among which is the Metropolitan Life Building. Others are Wanamaker's and Macy's (both large department stores), and one of the largest laundering plants.

If oil can be used so advantageously in New York as experience indicates, there seems to be no reason why it should not work better than coal in any other large city. The fire laws in New York City are said to be as strict as any.

Kerosene is in greater demand. Many householders are putting in kerosene heaters in anticipation of the coal shortage this winter. The Standard Oil Co., of New Jersey, is understood to have perfected a burner using kerosene distillate in place of coal for residential purposes, the cost of installing which approximates $250, not including cost of the reserve tank which goes outside of the house.

### Export Market Improving

Exporters report a continuation of improvement in the oil export market which was so marked during July. The volume of shipments not only has increased, but export prices are higher than they were a year ago, despite the recent reductions.

These prices are shown in a table prepared by the Department of Commerce, giving monthly averages during the last year, as follows, (cents per gallon):

| 1922— | Gasoline | Lubricants | Kerosene | Crude Oil |
|---|---|---|---|---|
| June | 22.6 | 24.0 | 9.2 | 5.2 |
| May | 22.3 | 24.0 | 9.2 | 5.4 |
| April | 21.4 | 20.0 | 8.5 | 4.5 |
| March | 21.4 | 21.9 | 9.5 | 4.9 |
| February | 21.2 | 22.5 | 10.0 | 4.6 |
| January | 21.8 | 25.4 | 9.5 | 3.9 |
| 1921— | | | | |
| December | 23.6 | 24.4 | 10.3 | 4.2 |
| November | 20.0 | 25.8 | 9.9 | 4.3 |
| October | 17.1 | 23.0 | 8.6 | 3.5 |
| September | 18.0 | 24.5 | 9.3 | 3.6 |
| August | 20.7 | 29.5 | 9.5 | 3.5 |
| July | 20.7 | 30.0 | 11.5 | 4.2 |

This table shows that while gasoline and crude oil prices are higher, on the average, prices of lubricants and kerosene are considerably lower, than a year ago.

Lubricating oil shipments from the port of New York are irregular, but the average movement over a period of weeks is still considerably above that of the early part of the year. During the week ended September 1, incomplete figures show a movement of 582,600 gallons, compared with 1,576,358 gallons the week before, figured on the same basis.

### Mexican Oil Receipts

Imports of crude oil from Mexico during the past week were small, amounting to only 357,000 bbls., or a daily average of 59,500 bbls., compared with 346,000, or 57,600 bbls. daily, the week before. Figures by companies for the two weeks follow (totals, in bbls.):

| | Week Ended— Sept. 1 | Aug. 25 |
|---|---|---|
| Mexican Petroleum | 115,000 | 66,000 |
| Standard Oil of N. Y. | 92,000 | ..... |
| Tide Water Oil | 80,000 | 70,000 |
| Atlantic Gulf Oil | 70,000 | 70,000 |
| Standard Oil of N. J. | ..... | 140,000 |
| Total | 357,000 | 346,000 |
| Daily average (6 days) | 59,500 | 57,600 |

The following table shows imports by companies for the month of August, July and June, in barrels:

| | August | July | June |
|---|---|---|---|
| Standard, N. J. | 850,000 | 1,402,000 | 976,000 |
| Mexican Pet. | 602,000 | 418,000 | 466,000 |
| Tide Water Oil | 370,000 | 740,000 | 440,000 |
| Atlantic Gulf Oil | 240,000 | ..... | ..... |
| The Texas Co. | 130,000 | 130,000 | 130,000 |
| Standard, N. Y. | 92,000 | 86,917 | 42,000 |
| Penn Mex Fuel | 74,000 | ..... | ..... |
| Warner-Quinlan | 50,000 | 28,000 | ..... |
| Asiatic Petroleum | 20,000 | ..... | 41,250 |
| Pierce Oil Corp. | ..... | 145,000 | ..... |
| Barber Asphalt | ..... | 74,503 | ..... |
| Miscellaneous | ..... | ..... | 112,000 |
| Total | 2,428,000 | 3,024,420 | 2,207,250 |

The following table shows imports by companies for the same months, giving daily averages, based on refinery working days (Sundays excluded), in barrels:

| | August | July | June |
|---|---|---|---|
| Standard Oil, N. J. | 31,000 | 54,000 | 37,000 |
| Mexican Petroleum | 22,000 | 16,000 | 18,000 |
| Tide Water Oil | 14,000 | 30,000 | 17,000 |
| Atlantic Gulf Oil | 9,000 | ..... | ..... |
| The Texas Co. | 5,000 | 5,000 | 5,000 |
| Miscellaneous | 9,000 | 13,000 | 7,000 |
| Total daily average | 90,000 | 118,000 | 84,000 |

The above daily average, showing all companies importing more than 100,000 barrels per month, are significant in that they indicate that there has been no effect on shipments from Mexico due to the encroachment of salt water in the Toteco-Cerro Azul or other oil fields in Mexico. During the month of August Standard Oil Co., of New Jersey, and Tide Water Oil received considerably less Mexican crude than in July, but only slightly less than in June, before the salt water appeared at Toteco-Cerro Azul.

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Every detail of the GASO Duplex Piston Steam Pump (Valve Pot Type) has been designed by skilled engineers with high pressure in mind. Note, for example, these sturdy specifications:

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Made in various sizes with capacities ranging from 63 to 212 barrels per hour. A hardy member of the GASO family that hard work simply can't faze. Write today for instructive catalog describing complete line of pumps and fittings.

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# Petroleum Equipment Activities

## *Oil Well Supplies Increase In Price*

Prices of additional oil well supplies increased during the last week, the higher prices being presaged by the average of 6 to 7 per cent increase in tubular goods the previous week. Notices were received in the Mid-Continent section last week that beginning September 1 all wire supplies would be increased. Although definite new prices had not been announced at this writing it is thought that the increase will be around 5 per cent. Notices were received that iron pipe fittings has been increased around 5 per cent. The increases did not come as a surprise to the supply trade as it was generally predicted when tubular good were increased on August 23, due to a $6 a ton increase in steel that higher prices on all steel and iron supplies would result. Some supplies will be slow in responding to the general upward trend as they do when prices are decreasing.

The increase in price of tubular goods and other supplies has apparently failed to have any effect on the amount of goods being sold. This condition exists in spite of the fact that additional increases are expected by many. But the supply business has been experiencing a slump for nearly two months and only a better crude market will apparently bring about more activity in the buying of supplies. In so far as tubular goods is concerned, however, the demand is as large as the mills are able to care for, due to limited production brought about primarily by coal and rail strikes. In this connection there are some orders undelivered to Mid-Continent points which were placed with the mills in early summer.

During the week it was announced that the Reading Iron Works has increased Standard, California, South Penn casing and regular rotary drill pipe $6 a ton. All tubing drive pipe and 2-inch line pipe was increased $10 a ton. Upset tubing and upset rotary was not advanced. These increases follows those announced August 23 by the National Tubing Co.

Although as has been indicated from week to week the supply business has been experiencing a dull period, due to weak crude market, the lull has not been so noticeable as to cause only minor reductions in personnel of the supply companies. There is probably no better indication that the heads of the companies are expecting a quick return to improved trade conditions than this fact. The sales and office forces of the companies are being held practically intact, while the reductions at the shops are not as large as might be expected. This condition is in contrast to that of a year and a half ago when the trade was going through another dull period.

### NO IMPROVEMENT LOCALLY IN STORAGE TANK TRADE

The last week failed in Tulsa to show any improvement in the purchase of storage tanks by producers and refiners who have joined in the "Build a Tank" movement. In fact it is apparent that the movement in so far as the actual purchase of tanks is concerned has about spent itself under present conditions. A further lowering of crude prices or a pro-rating of runs would probably result in an enlarged demand, but without a change of that character the already announced programs will about cover all the storage that is to be done, because of present crude prices.

Although manufacturers still report a large number of inquiries there were no orders of any size placed during the last week. The Waite Phillips interests purchased an additional 55,000-bbl. tank from the United Iron Works. It is understood that the tank will be erected in the Bristow Field. The same interests had already placed orders for two 55,000-bbl tanks with the United Iron Works. Some of the manufacturers report sufficient orders to keep them busy until late fall or the first of the year. In fact practically all manufacturers are handling, at the present, about all the business they can under present conditions in regard to steel trade and rail shipping facilities.

### JENNY DEMONSTRATES K. B. REFINERIES CLAY

W. L. B. Jenny, engineer for the Refineries Clay Co., of Los Angeles, Calif., has been in Tulsa for the past three weeks interesting refiners of lubricating oils in the use of K-B decolorizing clay. The clay is finely ground, acid treated, mined and treated in California. In practice the clay is mixed with the oil, which has been heated to the proper temperature in mechanical agitators. The situation is continued until the action of the clay is complete, the time varying from 30 minutes to an hour. Then the mixture of clay and oil is pumped through a pressure filter, which filters the clay from the oil and gives the finished product. It is claimed for the process that it lowers clay cost, gives greater mechanical efficiency, uniform and controlled results, better oils and less capital invested in equipment.

The clay is used only once, which does away with the calcimining or burning plant and the cost of revivification of the coarse earth. K-B clay also is used for the extraction of sulphur from gasoline and kerosene. It is claimed by its manufacturers that when used for this purpose a filter is desirable, but not necessary, for the clay may be mixed with the cold oil in an ordinary conical bottomed agitator, using air agitation, and the clay settled out and drawn off through the discharge at the bottom of the cone. Some acid is usually necessary to produce a sweet smelling kerosene. The clay may be used to carry down the acid.

### TANK CARS GET CARELESS TREATMENT THESE DAYS

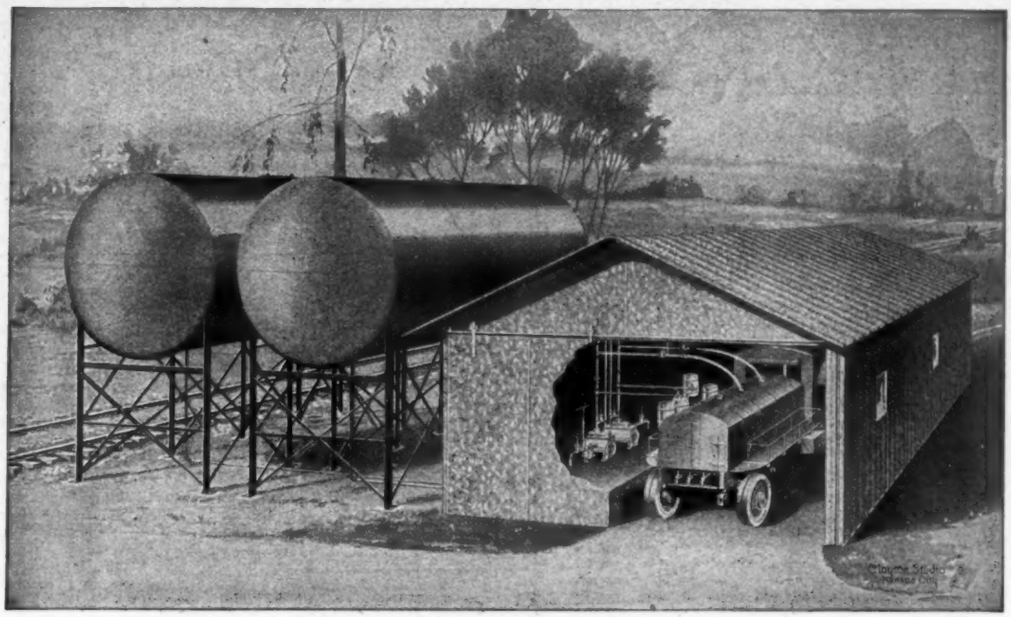
Tank car companies and owners of tank cars generally are complaining regarding repairs that they are required to make on cars. It is said that dome covers, valves and others detachable parts of the tank cars are often missing after a shipment. The railroads are required to make good all losses of this character, but it is claimed that duplications are often imperfect and result in direct losses in shipments and delays. According to company officials it is apparent that the situation can be traced to rail employes who are deliberating using this method to further complicate the present rail situation brought about by the strike of the shopmen.

### LEE C. MOORE MOVES OFFICES

Lee C. Moore & Co., manufacturers of steel derricks and exclusive agents for Carnegie Steel Co. drilling equipment west of the Mississippi River, have moved their Tulsa offices from the tenth floor of the Mayo Building to new and larger quarters at 812-813-814 Atlas Life Building, Tulsa.

### BUILDING O'DONNELL REFINERY

WHITTIER, Calif., Sept. 1.—Construction work has started here for the refinery of the O'Donnell Refining Co. The plant, which will have an initial capacity of 1,000 bbls. daily, will be in operation in 60 days, according to present plans. The Hillons process is to be a part of the refinery equipment.



# BUTLER ALL-STEEL BUILDINGS

READY TO ERECT — PORTABLE

Fire-Proof

Portable When Desired

Adaptable to Many Requirements

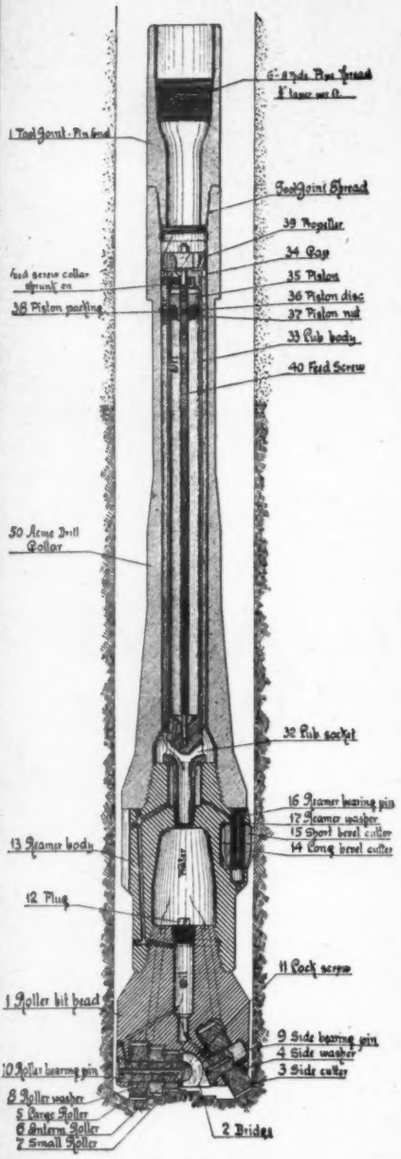
Furnished in types and sizes
to meet practically any need

*Let us know your requirements—ask for free circular*

## BUTLER MANUFACTURING CO.

KANSAS CITY MINNEAPOLIS

# New Improved
## Reed Screw-Type
# Lubricator




LUBRICATOR devices developed and used prior to the new Reed Screw-type Lubricator (as applied to rock bits) have had this very serious handicap: *Partial displacement of the lubricant with dirt, grit and sand every time the bit was lowered into the hole. The sand rapidly ground out the bearings of the bit.* If you have used rock bits, you have no doubt experienced this setback. Such was due to the strong back pressure which forced the oil out of the bearings as bit was lowered in the well.

Designed on the screw principle, with positive action of a screw, the piston is forced down and drives lubricant onto bearings only while operating. *The flow of oil can never be reversed, no matter how strong the back pressure in the hole. Pump pressure can not move the piston either up or down.*

Only after the most thorough tests has the Reed Lubricator been put on the market. In every test, bits were pulled, bearings examined, showing *perfect lubrication* throughout life of the cutters. The oil chamber showed no signs of foreign sediment, unquestionably proving the positive nature of the screw type feed. High pump or other pressures have no effect on piston. The *flow* of fluid moves the propeller.

Pump pressure does not operate the *Screw-type Lubricator*, and therefore very high pump pressures can be used in chalk rock and similar strata to force out the cuttings without forcing the oil out of the lubricator chamber. Pump pressure types of lubricators empty the oil chamber very quickly in deep wells, causing bearings to run dry, cones lock, wear flat and will not make hole.

With high pump pressure, the Reed Roller Bits drill these difficult formations with complete success. No greater or more severe test could be devised to demonstrate the revolutionary character of this invention.

"Reed Service Means Now"

**Other Reed Leaders:**

REED ROLLER BITS AND REAMERS
REED BACK UP POSTS
REED REVERSING TOOL
AUTOMATIC VICE GRIP PIPE TONGS
MILLING TOOLS, ETC.

# Reed Roller Bit Co

**HOUSTON, TEXAS, U. S. A.**

Stocks with Continental Supply Co. and Frick-Reid Supply Co.

CALIFORNIA OFFICE: 914 Loew State Theater Bldg., Los Angeles. Phone 65154; ask for Mr. E. B. Wiggins


# Natural Gas Developments

### KANSAS WILL INVESTIGATE NATURAL GAS SITUATION

TOPEKA, Kans., Sept. 3.—A thorough investigation of the gas business in the State of Kansas is to be made under the direction of the Public Utilities Commission before any increase of rates are allowed the producing and distributing companies within the State. Announcement to this effect was made following the recent filing by the Kansas Natural Gas Co. and the Empire Natural Gas Co. of requests for permission to increase the rate to the distributing companies to 40 cents a 1,000 cubic feet from 35 cents, the present rate. Following the action of the producing companies, the distributing companies have filed requests for authority to increase their rates to the consumers to cover the increase to them.

The commission is now devoting its efforts to securing detailed data concerning the gas industry in the State. The report upon which the commission will base its actions will cover the amount of gas available in the State, the cost of production and distribution and all other matters which enter a question of what constitutes a fair rate to the distributing and producing companies. October 17 has been set as the date for the hearing of the application filed by the Empire and Kansas Natural Companies.

## *Canadian Gas and Oil Men Hold Annual Convention*

By VICTOR LAURISTON

NIAGARA FALLS, Ont., Sept. 1.—The fourth annual convention of the Natural Gas and Petroleum Association of Canada, held yesterday and today at the Hotel Clifton, concluded this evening with a banquet. The business session was held Thursday afternoon under the chairmanship of President Charles E. Steele, of Port Colborne. Following the president's opening address, the treasurer's report was presented by Secretary-Treasurer S. A. Morse, showing the finances of the association to be in a very satisfactory condition.

The report of the board of directors, presented by P. S. Coate, of Chatham, and of the laws and legislation committee, presented, in the absence of Major E. Sweet, the chairman, by H. R. Davis, deals principally with the recent natural gas legislation in Ontario, under which the natural gas referee, Hon. G. F. Henderson, has been superseded by a board of reference. The consensus of opinion was that the workings of the new act would be beset by difficulties; but it was hoped some of the objectionable features would be removed by amendments at the next session of the Legislature. In the meantime, the natural gas industry will do everything possible to make the act serviceable and of benefit to the industry and the public.

The report of the nominating committee, presented by D. A. Coste, of Niagara Falls, recommended the re-election of the old officers and directors, as follows: President, Charles E. Steele, Sterling Gas Co., Port Colborne, Ont.; vice presidents, A. M. McQueen, Imperial Oil (Ltd.), Toronto, Ont., and P. S. Coate, Chatham Gas Co., Chatham, Ont.; secretary-treasurer, S. A. Morse, Union Natural Gas Co., Chatham, Ont. Directors: Perry A. Little, Buffalo, N. Y.; R. L. Pattinson, Chatham, Ont.; H. B. Pearson, Calgary, Alta.; H. W. Braden, Brantford, Ont.; Gordon D. Wickett, Windsor, Ont., and E. P. Rowe, Toronto, Ont.

The report was adopted unanimously. Mr. Steele has been president of the Natural Gas and Protective Association since its inception in June, 1919; and has recently been named representative of the gas companies on the new natural gas board of reference. The meeting approved Windsor, Ont., as the place of the 1923 convention, the date to be determined by the executive.

The delegates spent Friday morning in sightseeing trips, visiting the various places of interest by automobile, and a number also were the guests of D. A. Coste at the Lewiston golf course.

President Steele, in the course of his address on Friday afternoon, referred to his recent appointment to the natural gas board of reference. He regarded the prospective workings of the board with considerably more optimism than when first invited to be a member, and spoke with approval of his colleagues, Chairman D. O. Ellis, and J. W. Ward, representative of the consumers.

C. D. Dean, of Imperial Oil (Ltd.), read an interesting paper on "Refining of Crude Oil." "The Consumer's Viewpoint" was discussed by H. S. Rowley, general contract agent of the Dominion Natural Gas Co., who urged a greater effort on the part of company representatives to understand the consumer's attitude. An interesting innovation at the end of this paper was a dramatic recitation by Reg Trayer, who, assuming in turn the roles of disgruntled customer, supercilious clerk and suave manager, illustrated the wrong and right methods of handling the dissatisfied customer.

"Natural Gas Distribution Matters" was discussed by R. B. Kilpatrick, of the Windsor Gas Co., and H. R. Davis, general manager of the Dominion Natural Gas Co., dealt with "The Conservation Problem." Mr. Davis took occasion to urge that conservation be made practical so as not merely to save gas but to serve the best interests of both consumers and producers. The ensuing discussion was featured by the suggestion of F. W. James, general manager of the Union Natural Gas Co., that the use of the term "natural gas" had helped to create the impression that gas was natural in the same sense as water, air and sunshine and equally the property of the public. He urged the substitution of the term "mineral gas" as an educative measure.

At the banquet at the Hotel Clifton this evening, John B. Hopkins, in behalf of the city of Niagara Falls, welcomed the visitors officially. The feature of the evening was an address by Douglas Malloch on "Some Sinners I Have Met." President C. E. Steele was toastmaster.

### RAWLINS NOW HAS GAS

RAWLINS, Wyo., Sept. 2.—The 28 miles of 6-inch gas line from this city to the Mahoney Dome, in Carbon County, has been completed and natural gas is now being used here for the first time. A part of the distributing lines was completed within the city previous to the laying of the main line. The line was laid by the Illinois Pipe Line Co. for the Rocky Mountain Gas Co. It is understood that extensions to other points are to be made by the company.

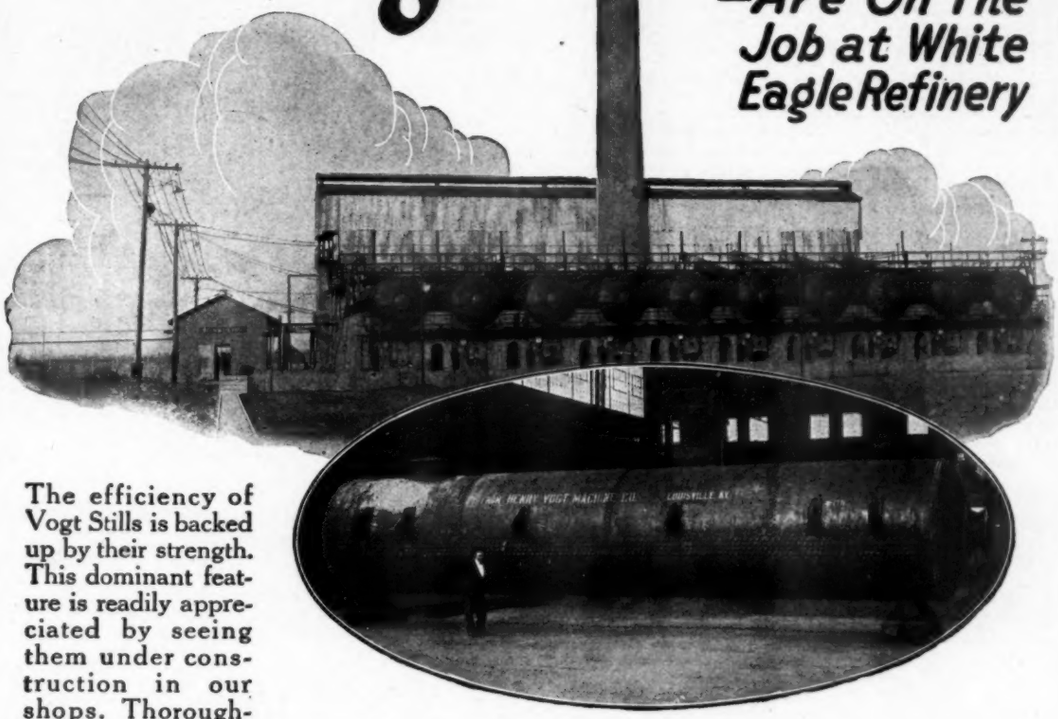
### *GAS COMPANY AND TOWN ENDED THEIR DISPUTE*

CHATHAM, Ont., Sept. 1.—Arrangements have been reached for a settlement of all matters in dispute between the Northern Alberta Natural Gas Development Co. and the city of Edmonton, Alta. As a result of the tentative agreement reached, the litigation instituted by the city against the company for re-possession of leases in the Viking Field is to be dropped. The city agrees to apply to the Provincial Utilities Commission to fix the gas rates. The company is to pay the city $20,000 in settlement of all damages, and is to deposit $50,000 as security for carrying out its further undertakings. The company is planning to deliver gas to the city from the Viking Field by July, 1923. The undertaking involves the construction of between 75 and 85

(Continued on Page 96.)

# Vogt Stills

## —Are On The Job at White Eagle Refinery



The efficiency of Vogt Stills is backed up by their strength. This dominant feature is readily appreciated by seeing them under construction in our shops. Thoroughness in every detail, from the selection of best material for the purpose, to the finished product, assures all that's desired in Stills for the refinery. The illustration shows a battery of ten Vogt Pressure Stills installed in the White Eagle Refinery, Wichita, Kansas. The insert shows one of the 8' x 40' pressure stills just completed. We cordially invite refiners contemplating the purchase of Fire, Crude or Pressure Stills to visit our plant.

*Write Us Today About Your Requirements*

**HENRY VOGT MACHINE CO.**
INCORPORATED
**LOUISVILLE, KY.**

BRANCH OFFICES: NEW YORK, CHICAGO, TULSA, DALLAS

**MANUFACTURERS OF OIL REFINERY EQUIPMENT :: DROP FORGED STEEL VALVES AND FITTINGS :: WATER TUBE AND HORIZONTAL RETURN TUBULAR BOILERS :: ICE-MAKING AND REFRIGERATING MACHINERY**

# Crude Petroleum Statistics July, 1922, and Preceding Months

**(Preliminary data, subject to revision, based on reports received up to August 24.)**

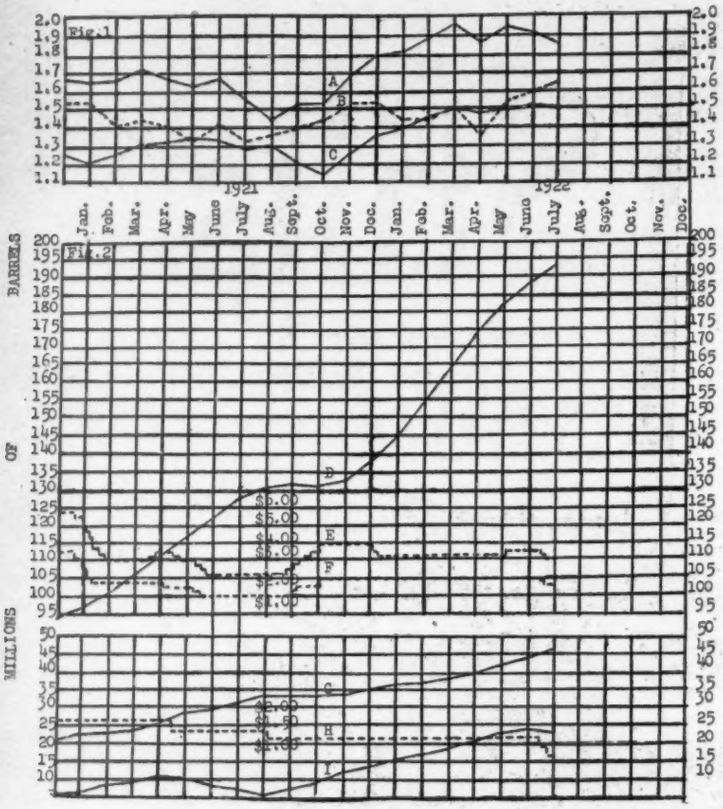



Fig. 1. Monthly changes in daily average rate of—
(A) Domestic production of petroleum plus imports of crude oil.
(B) Estimated consumption of domestic and imported petroleum.
(C) Domestic production (petroleum transported from producing properties).

Fig. 2. Monthly changes in stocks of petroleum held on last day of month and in prices.
(D) Net pipe line and tank farm stocks of domestic petroleum east of California.
(E) Price per barrel at wells, Pennsylvania grade crude oil
(F) Price per barrel at wells, Oklahoma-Kansas grade crude oil.
(G) Gross pipe line, tank farm and producers' stocks in California.
(H) Price per barrel at wells California crude oil, 20° to 20.9° gravity.
(I) Stocks of Mexican petroleum held in the United States by importers.

During July, according to the United States Geological Survey, the daily average consumption of crude oil (deliveries to consumers), amounting to 1,657,645 bbls., increased more than 51,000 bbls. over that for June and is the highest recorded. Daily average production, amounting to 1,503,000 bbls., decreased 15,633 bbls.; pipe line and tank farm stocks of domestic petroleum increased more than 6 000 000 bbls., and for the first time since August, 1921, stocks of Mexican crude held in the United States by importers decreased. The official figures of imports and exports for July are not available, but a decrease in imports is indicated.

## PRODUCTION OF PETROLEUM BY STATES

The figures given below for the States east of California, compiled from reports made by pipe line and other companies to the United States Geological Survey, show the quantity of petroleum transported from producing properties during the months indicated. Petroleum consumed on the leases and produced but not transported from the producing properties is not included. These items are included in the final annual statistics, which show gross production—all the oil brought to the surface. The figures for California, the average of those reported by the Standard Oil Co. and by the Independent Oil Producers Agency, show gross production, in part estimated.

(Barrels of 42 United States gallons)

| State— | June, 1922* Total | June, 1922* Daily average | July, 1922 Total | July, 1922 Daily average | July, 1921 Total | July, 1921 Daily average |
|---|---|---|---|---|---|---|
| Oklahoma: | | | | | | |
| Osage County | 3,440,000 | 114,667 | 3,503,000 | 113,000 | 1,746,000 | 56,323 |
| Remainder of State | 9,490,000 | 316,333 | 9,827,000 | 317,000 | 8,380,000 | 270,322 |
| Total, Oklahoma | 12,930,000 | 431,000 | 13,330,000 | 430,000 | 10,126,000 | 326,645 |
| California | 10,695,000 | 356,500 | 11,591,000 | 373,903 | 10,247,000 | 330,548 |
| Texas: | | | | | | |
| Central and Northern | 6,566,000 | 218,867 | 6,678,000 | 215,419 | 5,523,000 | 178,161 |
| Coastal | 2,746,000 | 91,533 | 2,704,000 | 87,226 | 2,557,000 | 82,484 |
| Total, Texas | 9,312,000 | 310,400 | 9,382,000 | 302,645 | 8,080,000 | 260,645 |
| Louisiana: | | | | | | |
| Northern | 2,644,000 | 88,133 | 2,737,000 | 88,291 | 1,998,000 | 64,452 |
| Coastal | 111,000 | 3,700 | 125,000 | 4,032 | 155,000 | 5,000 |
| Total, Louisiana | 2,755,000 | 91,833 | 2,862,000 | 92,323 | 2,153,000 | 69,452 |
| Kansas | 2,787,000 | 92,900 | 2,581,000 | 83,258 | 3,418,000 | 110,258 |
| Wyoming: | | | | | | |
| Salt Creek | 1,678,000 | 52,600 | 1,459,600 | 47,084 | 669,000 | 21,581 |
| Other districts | 696,400 | 23,213 | 755,000 | 24,355 | 474,600 | 15,309 |
| Total, Wyoming | 2,374,400 | 75,813 | 2,214,600 | 71,439 | 1,143,600 | 36,890 |
| Arkansas | 943,000 | 31,433 | 921,000 | 29,710 | 1,400,000 | 45,162 |
| Kentucky | 763,100 | 25,437 | 782,700 | 25,248 | 706,600 | 22,794 |
| Illinois | 791,000 | 26,367 | 768,000 | 24,774 | 805,000 | 25,968 |
| Pennsylvania | 639,000 | 21,300 | 622,000 | 20,065 | 566,000 | 18,258 |
| West Virginia | 703,000 | 23,433 | 566,000 | 18,258 | 727,000 | 23,452 |
| Ohio: | | | | | | |
| Central and Eastern | 407,000 | 13,567 | 388,000 | 12,516 | 403,000 | 13,000 |
| Northwestern | 181,000 | 6,033 | 175,000 | 5,645 | 173,000 | 5,580 |
| Total, Ohio | 588,000 | 19,600 | 563,000 | 18,161 | 576,000 | 18,580 |
| Montana | 188,000 | 6,267 | 222,000 | 7,161 | 116,000 | 3,742 |
| Indiana: | | | | | | |
| Southwestern | 72,000 | 2,400 | 74,000 | 2,387 | 77,000 | 2,484 |
| Northeastern | 23,000 | 767 | 20,000 | 645 | 22,000 | 710 |
| Total, Indiana | 95,000 | 3,167 | 94,000 | 3,032 | 99,000 | 3,194 |
| New York | 85,000 | 2,833 | 85,000 | 2,742 | 79,000 | 2,548 |
| Colorado | 9,600 | 320 | 8,400 | 271 | 8,400 | 271 |
| Tennessee | 900 | 30 | 300 | 10 | 1,400 | 45 |
| Total | 45,559,000 | 1,518,633 | 46,593,000 | 1,503,000 | 40,252,000 | 1,298,452 |

*Revised.

## PRODUCTION OF PETROLEUM BY FIELDS

(Barrels)

| Field— | June, 1922* Total | June, 1922* Daily average | July, 1922 Total | July, 1922 Daily average | Jan.-July inc., 1922 | Jan.-July inc., 1921 |
|---|---|---|---|---|---|---|
| Appalachian | 2,598,000 | 86,600 | 2,444,000 | 78,839 | 17,006,000 | 18,125,000 |
| Lima-Indiana | 204,000 | 6,800 | 195,000 | 6,290 | 1,316,000 | 1,457,000 |
| Illinois and S. W. Indiana | 863,000 | 28,767 | 842,000 | 27,161 | 6,072,000 | 6,388,000 |
| Mid-Continent | 25,870,000 | 862,333 | 26,247,000 | 846,678 | 181,468,000 | 148,116,000 |
| Gulf Coast | 2,857,000 | 95,233 | 2,829,000 | 91,258 | 20,288,000 | 19,684,000 |
| Rocky Mountain | 2,472,000 | 82,400 | 2,445,000 | 78,871 | 14,947,000 | 12,263,000 |
| California | 10,695,000 | 356,500 | 11,591,000 | 373,903 | 72,735,000 | 70,828,000 |
| Total | 45,599,000 | 1,518,633 | 46,593,000 | 1,503,000 | 313,832,000 | 276,861,000 |

*Revised.

## STOCKS

Stocks of petroleum are classified as follows:

Producers' stocks—Petroleum held on the producing properties (lease storage).

Pipe line and tank farm stocks—Petroleum that has been removed from the producing properties, but not delivered to refineries or to other consumers and is held on tank farms, in tanks along pipe lines, and in the lines.

Refinery stocks and stocks held by other consumers—Petroleum that has been delivered to refineries or to other consumers.

Pipe line and tank farm stocks constitute by far the greater part of the petroleum held in storage in the United States. For the States east of California such stocks are reported monthly to the Geological Survey as gross stocks, including the total contents of tanks and pipe lines, and as net stocks, which are gross stocks minus b.s. and water. Stocks for California are shown by figures collected by the Standard Oil Co. and include, in addition to gross pipe line and tank farm stocks, some unfinished products of topping plants that have been turned back to pipe lines, and also producers' stocks.

## STOCKS OF PETROLEUM ON LAST DAY OF MONTH

(Barrels)

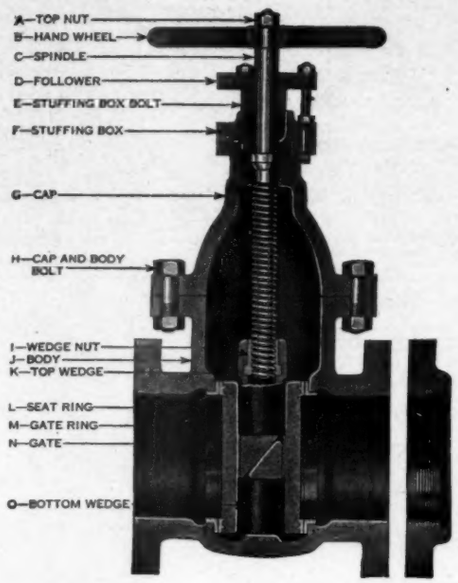
| | June 30, 1922* | July 31, 1922 | July 31, 1921 |
|---|---|---|---|
| A. Domestic petroleum—Source by fields† | | | |
| East of California—Pipe line and tank farm stocks: | | | |
| Appalachian: | | | |
| N. Y., Pa., W. Va., Eastern and Central Ohio: | | | |
| Gross | 6,031,000 | 6,019,000 | 4,424,000 |
| Net | 5,768,000 | 5,756,000 | 4,150,000 |
| Kentucky: | | | |
| Gross | 2,887,000 | 3,027,000 | 1,867,000 |
| Net | 2,784,000 | 2,982,000 | 1,804,000 |

## MONTHLY SUMMARY FOR 1921 AND FOR JANUARY-JULY, 1922

(Subject to revision)

| | Domestic production of petroleum (petr. transported from producing properties) Total (thous. of bbls.) | Domestic production of petroleum (petr. transported from producing properties) Daily average (bbls.) | Imports of "mineral crude oil" Total (thous. of bbls.) | Imports of "mineral crude oil" Daily average (bbls.) | Exports of "mineral crude oil" Total (thous. of bbls.) | Exports of "mineral crude oil" Daily average (bbls.) | *Stocks Held on last day of month (thous. of bbls.) | *Stocks Number of days' supply based on daily rate of consumption | Est. consumption of domestic and imported petroleum Total (thous. of bbls.) | Est. consumption of domestic and imported petroleum Daily average (bbls.) | ‡Number of prod. oil wells comp. during month |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1921—January | 37,959 | 1,224,484 | 13,193 | 425,577 | 743 | 23,979 | 125,589 | 78 | 49,421 | 1,594,226 | 1,825 |
| February | 35,366 | 1,263,071 | 11,384 | 406,580 | 794 | 28,368 | 132,222 | 94 | 39,323 | 1,404,393 | 1,574 |
| March | 40,905 | 1,319,516 | 12,302 | 396,875 | 750 | 24,188 | 139,499 | 96 | 45,181 | 1,457,452 | 1,452 |
| April | 40,040 | 1,334,667 | 10,104 | 336,797 | 748 | 24,932 | 146,399 | 103 | 42,496 | 1,416,533 | 1,324 |
| May | 41,985 | 1,354,355 | 9,148 | 295,078 | 874 | 28,179 | 155,267 | 116 | 41,391 | 1,335,194 | 1,405 |
| June | 40,354 | 1,345,133 | 10,255 | 341,842 | 586 | 19,538 | 162,463 | 114 | 42,827 | 1,427,567 | 1,471 |
| July | 40,252 | 1,298,452 | 8,047 | 259,575 | 538 | 17,365 | 168,821 | 126 | 41,463 | 1,335,580 | 1,162 |
| August | 40,894 | 1,319,161 | 3,352 | 108,136 | 885 | 28,542 | 169,682 | 124 | 42,500 | 1,370,968 | 952 |
| September | 36,508 | 1,216,933 | 9,139 | 304,615 | 881 | 29,352 | 172,874 | 135 | 41,574 | 1,385,800 | 788 |
| October | 35,539 | 1,146,429 | 11,635 | 375,336 | 747 | 24,085 | 174,149 | 120 | 45,152 | 1,456,516 | 752 |
| November | 37,880 | 1,262,667 | 12,994 | 433,125 | 869 | 28,967 | 178,260 | 117 | 45,894 | 1,529,800 | 899 |
| December | 41,957 | 1,353,452 | 13,753 | 443,654 | 525 | 16,949 | 185,623 | 120 | 47,819 | 1,542,548 | 1,108 |
| 1922—January | 43,141 | 1,391,645 | 13,097 | 422,474 | 727 | 23,440 | 196,228 | 136 | 44,906 | 1,448,581 | 1,161 |
| February | 40,814 | 1,457,642 | 12,077 | 431,327 | 659 | 23,532 | 205,851 | 148 | 39,609 | 1,414,607 | 1,143 |
| March | 46,634 | 1,504,323 | 14,004 | 451,742 | 806 | 26,004 | 221,588 | 146 | 47,095 | 1,519,194 | 1,323 |
| April | 44,635 | 1,487,833 | 11,859 | 395,646 | 933 | 30,784 | 235,962 | 173 | 40,997 | 1,366,567 | 1,442 |
| †May | 46,456 | 1,498,580 | 14,018 | 452,186 | 772 | 24,832 | †247,693 | c158 | †48,571 | ††1,566,866 | 1,511 |
| June (a) | 45,559 | 1,518,633 | 12,182 | 406,062 | 825 | 27,516 | 255,817 | 159 | 48,192 | 1,606,400 | 1,654 |
| July | 46,593 | 1,503,000 | bd 11,308 | 364,773 | bg 853 | 27,516 | 261,478 | 158 | 51,387 | 1,657,645 | 1,798 |

*Net pipe line and tank farm stocks east of California and gross pipe line, tank farm and producers' stocks in California plus stocks of Mexican petroleum held in the United States by importers. ‡From Oil City Derrick and Standard Oil Bulletin. †Revision based on correction submitted by one company. (a) Revised. (b) Official figures for July not available. (d) American Petroleum Institute Bulletin. (g) Calculated from daily average for June.




# CHAPMAN VALVES

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Iron body, bronze mounted, double disc gate valves for Oil and Natural Gas. These valves are especially designed and built for extreme working pressures and made exceptionally heavy throughout. We carry large stocks of all sizes at Tulsa and Beaumont.

*Send for Catalogue No. 40-A giving Complete Information and details*

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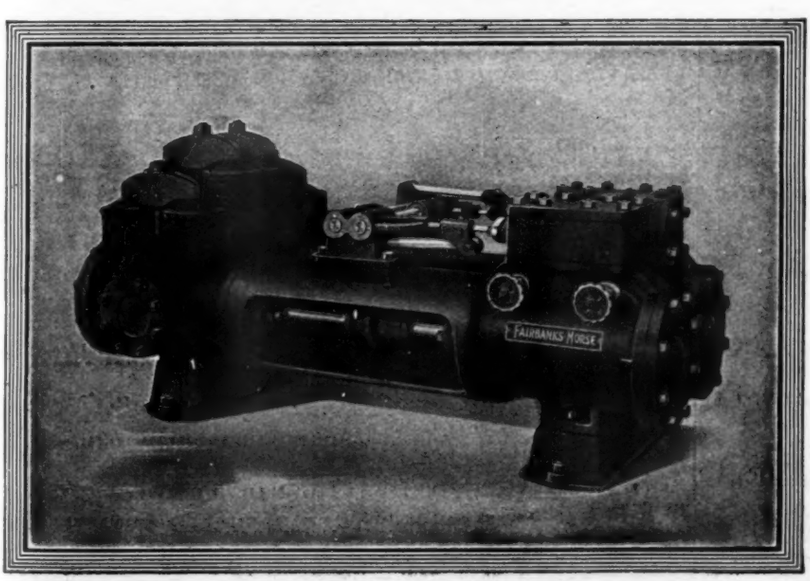
**REPRESENTED BY**

**E. L. Wilson Hdwe. Co., Beaumont, Texas** **Midwest Piping & Supply Co., St. Louis, Mo.**

# Fairbanks-Morse Oil Field Pumps




### Here is a "Slush Pump" that Drill Riggers Can Depend Upon

"Santa Maria" pumps were especially designed for service in connection with rotary drill outfits. You can depend on them for this and other similar severe service under high pressure.

These slush pumps have semi-circular cross section cradles which permit easy access to gland studs and stuffing boxes. There are no ribs in the valve seats—means a free passage for the liquid pumped—less friction—increased efficiency—longer life.

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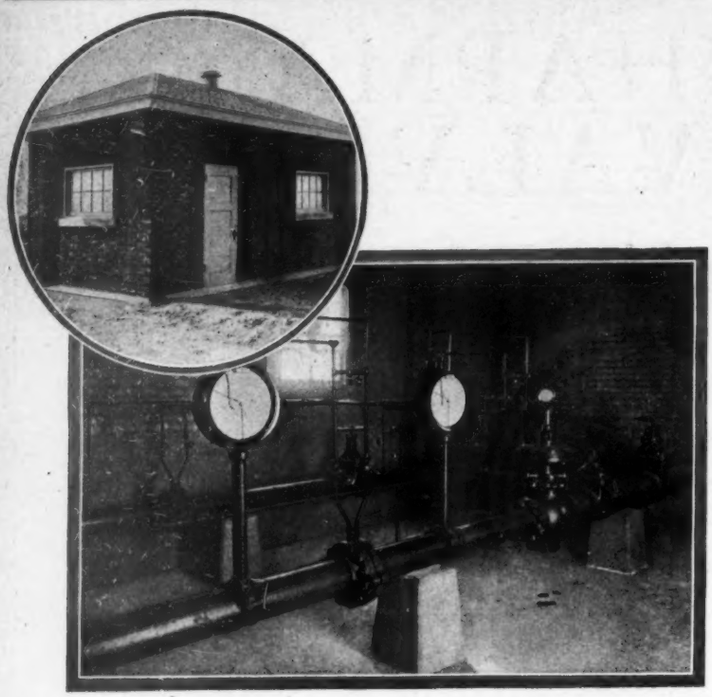

# A MODERN MID-CONTINENT MEASURING STATION

The photographs above show the outside and inside of a modern orifice meter station located at Oklahoma City. It is a duplex installation with Type C Foxboro Orifice Meters.

The Foxboro two-pen orifice meters register a clean, legible and permanent record of both static and differential pressures on one chart.

Extreme accuracy and the ability to endure the hardships of field service, due to correct design and finished workmanship, make Foxboro orifice meters the standard for gas measurement.

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**Explanation of Installation**

*A differential regulator is set in the main line and when the capacity of the by-pass meter is approached the differential regulator automatically opens and the second meter begins to register.*

**THE FOXBORO CO., Inc.**
**FOXBORO, MASS., U. S. A.**
**213 S. Cincinnati St., Tulsa, Okla.**

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| New York | Boston | San Francisco |
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FOXBORO
TRADE MARK
118-191


| | | | |
|---|---|---|---|
| Lima-Indiana | | | |
| Gross | 1,336,000 | 1,164,000 | 1,621,000 |
| Net | 1,046,000 | 902,000 | 1,291,000 |
| Illinois-Southwest Indiana: | | | |
| Gross | 9,925,000 | 10,199,000 | 6,566,000 |
| Net | 9,428,000 | 9,702,000 | 6,975,000 |
| Mid-Continent: | | | |
| Oklahoma, Kansas, Central and North Texas: | | | |
| Gross | 140,211,000 | 144,326,000 | 98,518,000 |
| Net | 129,245,000 | 133,294,000 | 88,427,000 |
| North Louisiana and Arkansas: | | | |
| Gross | 16,662,000 | 16,451,000 | 10,096,000 |
| Net | 16,034,000 | 15,854,000 | 9,485,000 |
| Gulf Coast: | | | |
| Gross | 24,468,000 | 24,722,000 | 17,975,000 |
| Net | 22,970,000 | 23,043,000 | 16,476,000 |
| Rocky Mountain: | | | |
| Gross | 1,297,000 | 1,664,000 | 1,260,000 |
| Net | 1,250,000 | 1,649,000 | 1,247,000 |
| Total pipe line and tank farm stocks east of California: | | | |
| Gross | 202,817,000 | 207,572,000 | 142,327,000 |
| Net | 188,555,000 | 192,128,000 | 128,865,000 |
| California—Gross pipe line, tank farm, and producers' stocks | 47,477,000 | 45,188,000 | 31,634,000 |
| B. Mexican petroleum held in the United States by importers: | | | |
| At Atlantic Coast stations: | | | |
| Crude | 9,131,000 | 8,611,000 | 2,426,000 |
| Topped in Mexico | 2,409,000 | 2,320,000 | 1,055,000 |
| At Gulf Coast stations: | | | |
| Crude | 11,110,000 | 10,190,000 | 3,573,000 |
| Topped in Mexico | 1,135,000 | 2,041,000 | 1,123,000 |
| At Pacific Coast stations: | | | |
| Crude | ..... | ..... | 145,000 |
| Total, Mexican | 23,785,000 | 23,162,000 | 8,322,000 |
| Total net pipe line and tank farm stocks east of California, gross pipe line, tank farm, and producers' stocks in California, and stocks of Mexican petroleum held in the United States by importers | 255,817,000 | 261,478,000 | 168,821,000 |

†Stocks of domestic petroleum are reported by field of production and not by location of storage. Approximately 12,000,000 bbls. of oil originating in the Mid-Continent Field are held as pipe line and tank farm stocks east of Mississippi River.
Note.—Total contents of trunk pipe lines east of California, 9,423,000 bbls.
•Revised.

## IMPORTS AND EXPORTS OF "MINERAL CRUDE OIL"•

(Barrels)
(Compiled from the records of the Bureau of Foreign and Domestic Commerce)

| | June, 1922 | | July, 1922† | | | |
|---|---|---|---|---|---|---|
| | Total | Daily average | Total | Daily average | Jan.-July inc., 1922 | Jan.-July inc., 1921 |
| Imports into United States: | | | | | | |
| From Mexico | 12,104,348 | 403,478 | ..... | ..... | ..... | 73,432,656 |
| From other countries | 77,505 | 2,584 | ..... | ..... | ..... | 1,059 |
| Total | 12,181,853 | 406,062‡ | 11,307,974 | 364,773 | 88,345,151 | 74,433,715 |
| Ports of entry: | | | | | | |
| Atlantic Coast | 5,816,102 | 193,870 | ‡6,084,418 | 196,271 | 45,695,218 | 37,867,304 |
| Gulf Coast | 6,333,751 | 211,125 | ‡5,223,556 | 168,502 | 42,472,928 | 34,678,489 |
| Pacific Coast | ..... | ..... | ..... | ..... | 15,000 | 1,225,004 |
| Northern border | ..... | ..... | ..... | ..... | 5 | 966 |
| Mexican border | 32,000 | 1,067 | ..... | ..... | 162,000 | 661,952 |
| Total | 12,181,853 | 406,062‡ | 11,307,974 | 364,773 | 88,345,151 | 74,433,715 |
| Exports from United States: | | | | | | |
| Domestic crude oil: | | | | | | |
| To Canada | 694,704 | 23,157 | §717,867 | 23,157 | 4,435,819 | 4,065,376 |
| To other countries | 119,922 | 3,997 | §123,907 | 3,997 | 1,066,908 | 900,005 |
| Foreign crude oil | 10,844 | 362 | §11,222 | 362 | 62,248 | 67,291 |
| Total | 825,470 | 27,516 | §852,996 | 27,516 | 5,564,975 | 5,032,672 |
| Excess of imports over exports | 11,356,383 | 378,546 | 10,454,978 | 337,257 | 82,780,176 | 69,401,043 |

•Includes oil topped in Mexico. †Official figures for July not available. ‡American Petroleum Institute Bulletin, August 10, 1922. §Based on daily averages for June.

## CLASSIFICATION OF IMPORTS OF MEXICAN PETROLEUM

| Grades of oil imported— | Percentage of total Mexican imports— June, 1922• | July, 1922 | July, 1921 |
|---|---|---|---|
| Light crude( more than 16° Baume) | 59 | 65 | 72 |
| Heavy crude (less than 16° Baume) | 23 | 16 | 18 |
| Topped oil | 18 | 19 | 10 |

•Revised.

## ESTIMATED CONSUMPTION OF DOMESTIC AND IMPORTED PETROLEUM

(Barrels)

| | June, 1922• | | July, 1922 | | | |
|---|---|---|---|---|---|---|
| | Total | Daily average | Total | Daily average | Jan.-July inc., 1922 | Jan.-July inc., 1921 |
| Domestic petroleum: | | | | | | |
| †Deliveries to consumers and exporters. (Source by fields) | | | | | | |
| Appalachian | 2,412,000 | 80,400 | 2,312,000 | 74,581 | 15,160,000 | 15,598,000 |
| Lima-Indiana | 187,000 | 6,233 | 339,000 | 10,935 | 1,428,000 | 1,294,000 |
| Illinois and S. W. Indiana | 551,000 | 18,367 | 568,000 | 18,323 | 3,937,000 | 3,278,000 |
| Mid-Continent | 21,032,000 | 701,067 | 22,378,000 | 721,871 | 134,721,000 | 125,894,000 |
| Gulf Coast | 2,128,000 | 70,933 | 2,756,000 | 88,903 | 14,851,000 | 14,371,000 |
| Rocky Mountain | 2,346,000 | 78,200 | 2,076,000 | 66,968 | 14,933,000 | 11,652,000 |
| California | 9,259,000 | 308,633 | 9,880,000 | 318,710 | 62,569,000 | 61,434,000 |
| Total deliveries of domestic petroleum | 37,915,000 | 1,263,833 | 40,309,000 | 1,300,290 | 247,599,000 | 233,521,000 |
| Exports of domestic petroleum | 814,000 | 27,133 | ‡842,000 | 27,161 | 5,503,000 | 4,966,000 |
| Estimated consumption of domestic petroleum in the U. S. and territories | 37,101,000 | 1,236,700 | 39,467,000 | 1,273,129 | 242,096,000 | 228,555,000 |
| Imported petroleum: | | | | | | |
| §Estimated consumption in U. S. and territories | 11,091,000 | 369,700 | ‡11,920,000 | 384,516 | 78,661,000 | 77,487,000 |
| Estimated consumption of domestic and imported petroleum in U. S. and territories | 48,192,000 | 1,6060,400 | 51,387,000 | 1,657,645 | 320,757,000 | 302,042,000 |

•Revised. †Production plus domestic stocks at beginning of month minus domestic stocks at end of month. ‡See notes († ‡ §) in table above. §Imports of "mineral crude oil" minus exports of foreign crude oil plus decrease or minus increase of stocks of Mexican petroleum held in the United States by importers.

## P. & R. BUYS A PLANT SITE

The Producers & Refiners Corporation is reported to have purchased an 80-acre site west of Casper, Wyo., for the purpose of erecting a natural gasoline plant. Although no official announcement has been made, it is understood that the company contemplates the erection of one of the largest plants in that section.

## REFINERY AT FREDONIA

FREDONIA, Kans., Sept. 3.—The erection of a refinery will start here in the near future, according to present plans. The Chamber of Commerce has purchased a site on which the Red Bird Oil & Refining Co. has agreed to erect the plant. The company was recently organized for that purpose.

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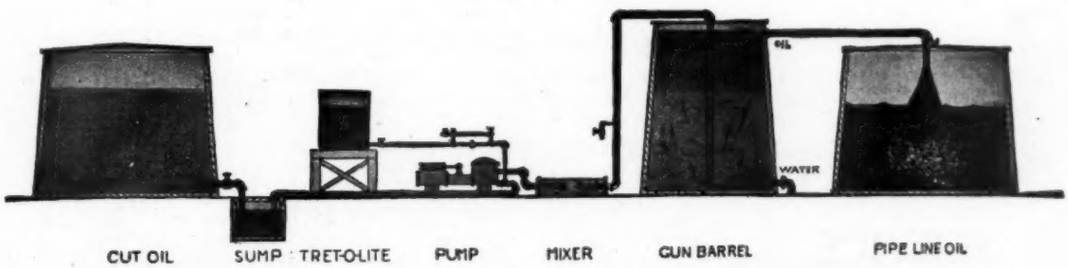


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# 87 NEW WELLS IN CALIFORNIA SHOW 55,470 BBLS. INITIAL OUTPUT

LOS ANGELES, Calif., Aug. 30.—Eighty-seven new producing wells were completed during July, showing a total initial production of 55,470 bbls. Long Beach had 24 new wells with an output of 31,320 bbls. a day. The uniformity of depth, slightly below 3 000 feet, combined with easy drilling, has naturally resulted in bringing the field up to a high state of productivity in a comparatively short period of time, unequaled in any field of the State.

This field, along with Santa Fe Springs, has attracted far more attention than any of the other fields, still there is every indication that the San Joaquin Valley has not been idle, and while the returns show only moderate producers in most instances, the total number of wells completed in the Midway-Sunset—18—with an average daily output of 5,750 bbls., makes a fair showing.

The Elk Hills district shows a great falling off as compared with its earlier development when the Standard Oil Co. had 20 wells producing 50 000 bbls. a day. Much of the earlier enthusiasm is now lacking as many of the wells are falling far short of expectation. Still, under normal conditions, the showing is not bad. Nine wells completed show a daily average of 4.400 bbls.

Santa Fe Springs shows a total of eight wells with a daily average of 6 050 bbls., while Huntington Beach added 14 with a daily output of 5.875 bbls.

Some delay was occasioned in getting complete returns from some of the outlying districts, and for this reason the report was held back. There may have been a few unimportant omissions, but the big showing in the list presented is the one best evidence of the disregard operators are taking of an oversupply. In most respects, they figure on large producers, and if they win they can deliver the goods even at a still lower price. But it is evident that they do not take into consideration the fact that the large purchasers are liable to terminate contracts at any moment. They will live and learn.

Following is the list of wells completed, giving their location, depth and approximate daily output:

**Kern River Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 6-29-28, | Whitmer Oil Co., 30... | 1,092 | 10 |
| San Joa. Div., | Associated Oil Co., 3... | 1,102 | 25 |
| | Associated Oil Co., 4... | 1,089 | 25 |
| Wells, 3; new production..... | | | 60 |

**Coalinga Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 1-20-14, | Penn-Coalinga Co., 11.. | 1,143 | 50 |
| 6-21-15, | Coalinga Oil & Development Co., 2..... | 1,970 | 50 |
| Wells, 2; new production..... | | | 100 |

**Maricopa Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 34-12-24, | Tannehill Oil Co., 23.. | 640 | 25 |
| 32-12-23, | Obispo Oil Co., 8..... | 2,510 | 50 |
| 34-12-24, | C. J. Berry, 20..... | 920 | 100 |
| 28-12-24, | B. B. & O. Oil Co., 25.. | 1,035 | 100 |
| 4-11-23, | Calitroleum Oil Co., 1.. | 3,520 | 1,500 |
| Wells, 5; new production..... | | | 1,775 |

**Midway Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 32-31-24, | Boston Pacific Oil Co., 6-B ..... | 3,290 | 75 |
| 32-31-24, | Boston Pacific Oil Co., 9-B ..... | 3,205 | 75 |
| 6-32-24, | Honolulu Cons., 3..... | 2,488 | 1,500 |
| 6-32-24, | Honolulu Cons., 8..... | 2,865 | 600 |
| 6-32-24, | Honolulu Cons., 29..... | 2,850 | 500 |
| 14-32-24, | Honolulu Cons., 9..... | 3,300 | 300 |
| 31-31-24, | Pacific Oil Co., 13..... | 2,720 | 50 |
| 31-31-24, | Pacific Oil Co., 22..... | 3,220 | 75 |
| 7-32-24, | Pacific Oil Co., 38..... | 2,960 | 350 |
| 15-32-24, | Pacific Oil Co., 15..... | 3,202 | 175 |
| 22-31-23, | C. C. M. Oil Co., 21.... | 1,309 | 50 |
| 32-31-24, | *Union Oil Co., 1..... | 3,960 | 200 |
| 23-31-24, | *Union Oil Co., 1..... | 1,380 | 25 |
| Wells, 13; new production..... | | | 3,975 |

*Federal Leases Nos. 5 and 6.

**Elk Hills Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 26-30-24, | Associated Oil Co., 41.. | 3,257 | 100 |
| 35-30-24, | Pacific Oil Co., 2..... | 3,010 | 1,750 |
| 35-30-24, | Pacific Oil Co., 36..... | 3,054 | 1,300 |
| 1-31-24, | Pan-Amer. Pet. Co., 10. | 3,378 | 100 |
| 1-31-24, | Pan-Amer. Pet. Co., 2.. | 3,359 | 50 |
| 1-31-24, | Pan-Amer. Pet. Co., 5.. | 3,290 | 500 |
| 2-31-24, | Pan-Amer. Pet. Co., 1.. | 3,952 | 25 |
| 2-31-24, | Pan-Amer. Pet. Co., 2.. | 3,045 | 125 |
| 2-31-24, | Pan-Amer. Pet. Co., 17. | 3,945 | 450 |
| Wells, 9; new production..... | | | 4,400 |

**McKittrick Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 16-29-20, | Wesco Pet. Co., 1..... | 310 | 10 |

**Santa Maria Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 18- 9-34, | Pan-American Pet. Co. (Soladino 1) ..... | 1,550 | 250 |

**Whittier Fullerton (Brea-Olinda Field)**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 9- 3- 9, | Santa Fe Co., 1..... | 4,289 | 25 |

**(Montebello Field)**

| | | | |
|---|---|---|---|
| 6- 2-11, | Red Star (Baldwin),1.. | 3,443 | 300 |

**(Coyote Hills)**

| | | | |
|---|---|---|---|
| 18- 3-10, | Standard (Murphy), 1.. | 4,453 | 250 |

**Santa Fe Springs**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 5- 3-11, | Petroleum Midway, Wickman 1 ..... | 3,792 | 1,000 |
| 5- 3-11, | Amalgamated, Butterworth 3 ..... | 4,463 | 400 |
| 6- 3-11, | Santa Fe Springs Syndicate, 1 ..... | 3,863 | 700 |
| 5- 3-11, | Gen. Pet.-Santa Fe, 4.. | 3,945 | 450 |
| 31- 2-11, | Shell Co.-G. H. & N., 2. | 3,761 | 1,600 |
| 5- 3-11, | Standard, Brownrig-Keller, 1..... | 4,930 | 600 |
| 31- 2-11, | Standard, Hepler, 1.... | 3,846 | 300 |
| 5- 3-11, | Standard, South Whittier, 2 ..... | 3,945 | 1,000 |
| Wells, 8; new production..... | | | 6,050 |

**Richfield Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 33- 3- 9, | Merchants Pet. Co., 4.. | 3,308 | 150 |
| 28- 3- 9, | Amalgamated, Mann, 2 | 3,400 | 75 |
| Wells, 2; new production..... | | | 225 |

**Huntington Beach**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 34- 5-11, | Union, Copeland 6..... | 4,063 | 500 |
| | Union, Copeland 11.... | 3,666 | 250 |
| 2- 6-11, | Pet. Midway, Elliott 2. | 3,429 | 600 |
| 2- 6-11, | Amalgamated, Miley Keck 15 ..... | 2,908 | 150 |
| 34- 5-11, | Amalgamated, Pearce 5 | 4,076 | 950 |
| | Argonaut, Harvey 1.... | 3,601 | 350 |
| 11- 6-11, | Gypsy Oil Co., Huston 4 ..... | 2,810 | 75 |
| 34- 5-11, | Pet. Midway, Volmer-Meyer 3 ..... | 4,114 | 700 |
| | Rio Bravo, Irish 2, 4.... | 3,668 | 350 |
| 2- 6-11, | Wellington Oil Co., 2.. | 3,865 | 500 |
| 34- 5-11, | Standard, Bolsa Chica, 6 | 3,596 | 450 |
| | Standard, Bolsa Chica, 7 | 3,807 | 650 |
| | Standard, Lease B, 12.. | 3,723 | 150 |
| - 6-11, | Standard, Lease E, 15.. | 2,698 | 200 |
| Wells, 14; new production..... | | | 5,875 |

**Redondo Field**

| S. T. R. | Co. and No. Well | Depth | Prod. |
|---|---|---|---|
| 5- 4-14, | Union Oil, Francis 1... | 3,906 | 400 |
| | Standard, Torrence Com., 1 ..... | 3,575 | 450 |
| Wells, 2; new production..... | | | 850 |

***Long Beach Field**

| Company and No.— | Depth | Prod. |
|---|---|---|
| Shell Co., Cherry Hill, 2..... | 3,301 | 2,000 |
| Shell Co., Hutton Com., 1..... | 3,377 | 175 |
| Shell Co., Jones, 3..... | 3,364 | 1,400 |
| Shell Co., Lynch, 1..... | 3,387 | 1,500 |
| Shell Co., Nesa, 1..... | 3,300 | 1,000 |
| Shell Co., Pickler, 2..... | 3,396 | 1,300 |
| Shell Co., Stratton, 1..... | 3,211 | 2,300 |
| Union Oil, L. B. Community, 2.. | 3,226 | 1,300 |
| Union Oil, L. B. Community, 3.. | 3,220 | 1,500 |
| Petroleum Midway, Fields, 1.... | 3,354 | 300 |
| General Pet. Co., B & S, 1..... | 3,246 | 2,800 |
| Dabney Syndicate, Buel, 10..... | 3,202 | 1,200 |
| Coast States Oil Co, 1..... | 3,160 | 1,900 |
| Henderson Syndicate, Walkiln, 1 | 3,235 | 2,700 |
| Jergins, Municipal, 1..... | 3,045 | 3,000 |
| Jergins, M & M, 1..... | 3,304 | 450 |
| Wm. Keck, Swaffield, 1..... | 3,327 | 1,800 |
| Marine Oil Co., Pelham, 2..... | 3,197 | 1,900 |
| Marine Oil Co., Paulson-Long, 3 | 3,237 | 1,200 |
| Progressive Oil Syndicate, 1.... | 3,217 | 1,500 |
| San Martinez, Fry, 1..... | 2,555 | 250 |
| Leonard Mutual, Jones, 1..... | 3,293 | 450 |
| United Oil Co., Denni, 4..... | 3,353 | 1,200 |
| Holmes & Co., 1..... | 3,176 | 200 |
| Wells, 14; new productio.....n.... | | 31,325 |

*Note.—All locations are practically confined to Section 29, Township 4, Range 12, and names above are lease owners.

Total number wells, 87.

Total new daily production, 55,470 bbls.

## EXPECT AUGUST EXPORTS OF OIL TO SHOW DECLINE

WASHINGTON, D. C., Sept. 4.—The Department of Commerce offers the suggestion that, while exports of petroleum for July showed very slight increase over those for June, indications are that shipments for August will decrease about 5,000,000 bbls., following the reported decline in production of approximately 40 per cent during the month. Unless new wells are developed within the next few months, this reduced output may be expected to continue, the department believes.

## GEOLOGISTS MEETING AT DENVER AN EXTRA SESSION

The meeting of the American Association of Petroleum Geologists at Denver, Colo., October 26-28, will not be the annual meeting. It is an extra session and the first fall meeting the association will have held. The next annual meeting will be held about the middle of March in 1923.

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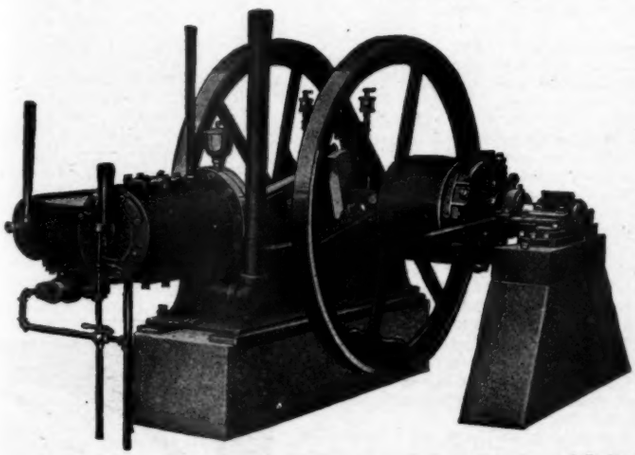

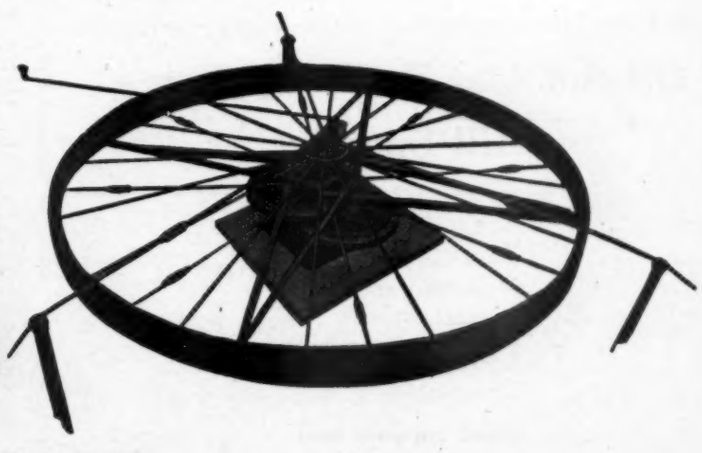

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| Shidler | Bryant | Virgil, Kans. |


## *U. S. G. Survey Figures Subjected to Analysis*

By CHARLES E. KERN

WASHINGTON, D. C., Sept. 2.—During July, according to the United States Geological Survey, the daily average consumption of crude oil (deliveries to consumers), amounting to 1,657,645 bbls., increased more than 51,000 bbls. over that for June and is the highest recorded.

The daily average production, amounting to 1,503,000 bbls., decreased 15,633 bbls.; pipe line and tank farm stocks of domestic petroleum increased more than 6,000,000 bbls., and for the first time since August, 1921, stocks of Mexican petroleum held in the United States by importers increased. The official figures of imports and exports for July are not available, but a decrease in imports is indicated.

The domestic production of petroleum (petroleum transported from producing properties) for July was 46,593,000 bbls., a daily average of 1,503,000 bbls.

The imports of mineral crude oil for July aggregated 11,308,000 bbls., the daily average being 364,773,000 bbls. and the exports of mineral crude oil were 853,000 bbls., the daily average being 27,516,000 bbls.

The stocks of oil held on the last day of June were 261,478,000 bbls., the number of days' supply based on the daily rate of cosnumption being 158 days. In June, the stocks provided 159 days' supply and in April the number of days' supply on hand was 173. In May, it was 158, the same as in July.

The estimated consumption of domestic and imported petroleum (deliveries to consumers) in July was 51,387,000 bbls., the daily average being 1,657,645 bbls.

The number of producing wells completed during July was 1,798, the largest number since January, 1921, when the number was 1,825. The completions in June were 1,654, and in May, 1,511, and neither of those numbers of completions in a single month was equaled since January, 1921, except for the month of February, 1921, when there were 1,574 completions.

The production of petroleum east of the State of California in July aggregated 46,593,000 bbls., compared with 45,559,000 for June and with 40,252,000 bbls. for July, 1921.

In Oklahoma, California, Texas, Louisiana, Kentucky and Montana there was an increased production compared with the previous month of June, while in Kansas, Wyoming, Arkansas, Illinois, Pennsylvania, West Virginia, Ohio and Indiana the production decreased. The most striking change in the percentage of production was the decrease in the State of West Virginia for July, compared with June, in this State the July production being 566,000 bbls., compared with 793,000 bbls. in June.

The production for the United States for the first six months of 1922 was 313,832,000 bbls., compared with 276,861,000 bbls. for the first six months of 1921.

The total net pipe line and tank farm stocks east of California, gross pipe line, tank farm and producers' stocks in California and stocks of Mexican petroleum held in the United State by importers on July 31, 1922, was 261,478,000 bbls., compared with 255,817,000 bbls. on June 30 and with 168,821,000 bbls. July 31, 1921.

The imports of petroleum into the United States during July, 1922, was 11,307,974 bbls., and the excess of imports over exports for the same month was 10,454,978 bbls.

The imports for June were 12,181,853 bbls., and the excess of imports over exports was 11,356,383 bbls.

During the first six months of 1922, the excess of imports over exports was 82,780,176 bbl., and for the first six months of 1921 this excess was 69,401,043 bbls.

No better illustration could be given of the menace of Mexican production to the domestic oil industry than is contained in the foregoing.

The estimated consumption of domestic and imported petroleum for July, 1922, was 51,387,000 bbls., and for June, 48,192,000 bbls.

The estimated consumption for the first six months of 1922 was 320,757,000 bbls., compared with 302,042,000 bbls. for the first six months of 1921.

### POLLUTION OF SEA WATERS BY FUEL OIL DISCHARGES

In the Daily Oil Digest of the American Petroleum Institute for August 31 the following extracts from journalistic comment on the pollution of sea waters by fuel oil discharged from oil burning vessels appear:

"In our picture page today we reproduce a photograph of sea birds killed by oil near Ailsa Craig, in the Firth of Clyde, hitherto one of the most famous haunts of wild fowl around the British coasts. It was taken on a visit last month by Dr. G. M. Vevers, an ardent naturalist on the staff of the Royal College of Tropical Medicine. He states he had entirely forgotten his notes on the subject in our columns, until he landed on the Craig, and saw scores of dead and dying birds lying about the shore, just above the high-water mark. The destruction is caused by oil steamers being allowed to clean out their tanks in the Firth. (Etc.)-London Times, 8-16.

Following is from Literary Digest, p. 24; 8-26 (see ½-col. story headed "The Menace of Floating Oil"): A correspondent of The Manchester Guardian, quoted in the Nautical Gazette (N. Y.), asserts that the discharge of oil at sea constitutes a menace to the shipping and fishing industry, and he calls for international action against the nuisance. Petroleum oil, he says, is composed largely of mixture of paraffins, which are very stable and not acted upon under ordinary circumstances by strong acids and alkalis, by prolonged contact with water and sunlight, or apparently, even by a few bacteria. We read further: The consequence is that oil thrown upon the sea is not destroyed by natural causes, as is the case with most refuse organic matter, but remains floating on the surface, entirely unaffected for an almost indefinite period and steadily increasing accumulation is found, sooner or later, to have very serious effect.

### CUMBERLAND TARIFFS REDUCED

OIL CITY, Pa., Sept. 1.—Tariffs which were filed Friday with the Interstate Commerce Commission by the Cumberland Pipe Line Co., Inc., reduce the gathering charge for oil taken from the wells or tanks to the pumping stations in Kentucky from 30 to 24 cents a barrel. The reduction becomes effective on October 1 and follows a recent reduction made in pipeage charges by the same company.

G.T.

### BIG PLANT ADOPTS FUEL OIL

ANSONIA, Conn., Aug. 30.—The American Brass & Copper Co., employing 3,500 persons, took steps today to substitute oil for coal in its plant here. Work started today on a tank designed to hold 900,000 gallons of oil. Officials said the inability to obtain coal forced the company to take the step.

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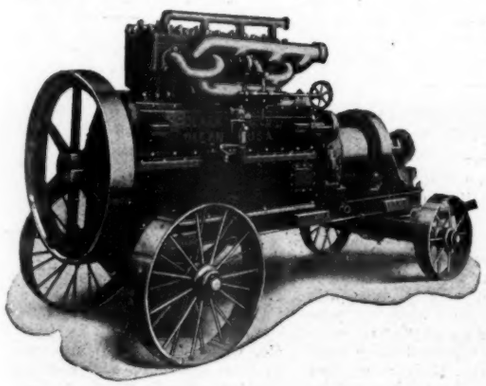

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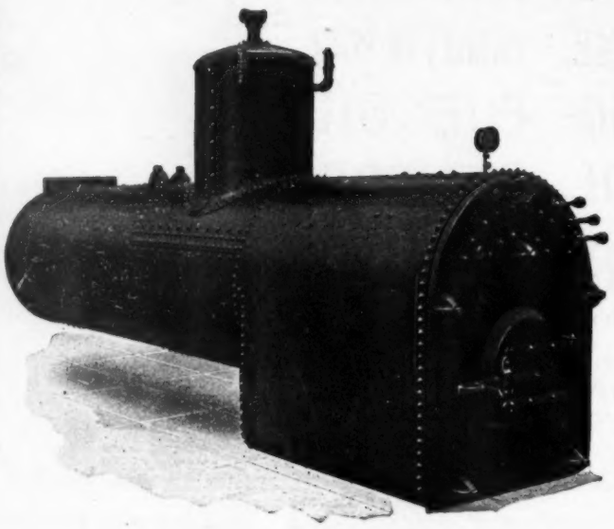

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## *Include Fuel Oil in Bills Now in Senate*

By CHARLES E. KERN

WASHINGTON, D. C., Sept. 2.—It is of interest to the petroleum industry to note that the movement for legislation to control the price and distribution of coal has been made to cover "other fuels" so that petroleum will be covered by its restrictions, although when this legislation was initiated no one gave a thought to the "other fuel."

With fuel oil selling below the cost of production, the legislation will have no effect upon that industry and, so far as anyone can determine at this time, its practical effect will bear upon coal only. The House passed the Winslow coal distribution and anti-profiteering measure on Thursday and it will now go into a series of recesses in waiting upon the Senate. The Senate, also having passed the bonus bill, is now ready to tackle the fuel bill, the result of which will be the substitution of other legislation bearing on the same subject. The Senate took up the Borah Coal Commission Bill immediately upon the passage of the bonus legislation and it is intended as a substitute to the Winslow bill. The Borah bill contains certain recommendatory features with regard to the nationalization, standardization and stabilization of the coal industry which do not appear in the Winslow bill.

The Cummins bill, originally drawn by Secretary Hoover, covering the regulation of the coal industry, has been made to apply equally to "other fuels" and is now being considered by the Committee on Interstate Commerce. This legislation has been made to cover oil, not because there was any fear that trouble would be experienced in that respect but to promptly meet any criticism that oil had been omitted. In view of the interest stirred up over oil by the investigation now under way by the Senate Committee on Manufactures, it was believed Senator LaFollette, Senator McNary or someone else would be to the front with amendments to cover that omission if it should be omitted.

In the present state of this legislation, it is not possible with any definiteness to predict the exact form in which it will be approved by the President. However, it is confidently believed that the legislation will be passed with a limitation of time in which it may be in effect or with power lodged in the President to bring it into effect when emergencies may arise.

### IN THE MATTER OF GETTING RESULTS FROM FUEL OIL

In the course of an article under the heading "Is Your Oil Burning Equipment Efficient?" the editor of Railway Age says:

It is not flattery but an expression of undeniable truth to say that the manufacturers of modern oil-burning equipment, having spent years studying combustion problems and developing efficient oil furnaces, know a thousand times more about such equipment than shop men who have not given the subject special study. At first blush it may appear a simple thing to connect fuel oil and air pipes to some sort of combining tube and project resulting flame into a furnace or onto work to be heated. Satisfactory results cannot be secured in this way, however, as has been demonstrated by costly experience. Three fundamental operations are carried to completion in every oil-burning furnace which is economical in the use of fuel. In the first place, there must be atomization or breaking up of the more or less highly viscous oil into minute particles; second, the operation is to change these particles of oil and gas; third, is to supply just enough air for complete combustion. It stands to reason that these three functions cannot be performed except in a suitably designed furnace and with burner scientifically constructed."

### GROWTH OF THE MOTOR SHIP INDICATED BY NEW ORDERS

NEW YORK, Sept. 2.—Because of numerous orders, the prospect for the motorship industry is exceptionally bright for next year, according to a review of conditions in the trade by "Motorship." It is stated that 41 Diesel engined vessels are building or in contemplation, and that contracts for 19 conversion jobs have either been signed or are in negotiation. The latest report of Lloyd's Register is cited as a remarkable indication of the growth of the motorship and oil-engine industry. There are now 1,639 oil-engined motorships of 1,511,000 gross tons, including 149 ships of more than 3,000 gross tons. There are now 2,793 oil-burning steamships in operation.

## NATURAL GAS

(Continued from Page 86.

miles of pipe lines as well as about 100 miles of distributing lines in the city.

The newly appointed natural gas board for the Province of Ontario will hold its first sitting at Chatham on September 26, to hear applications of the Township of Romney in regard to the franchises of the Union Natural Gas Co., the Southern Ontario Gas Co. and the Beaver Oil & Gas Co. The township claims that its franchises are primarily pipe line franchises and that, consequently, under the new natural gas act, the rate for gas to consumers within the township cannot be increased. At the same time, an application will be made by the Union Natural Gas Co. for the fixing of an equitable rate for various municipalities served directly by the company. V.L.

### CHEAP GAS AN INDUCEMENT

LONG BEACH, Calif., Sept. 1.—Special inducements in the way of cheap fuel are to be made to manufacturers to locate here. The Chamber of Commerce has raised a large fund to advertise the advantages of this city as a manufacturing center due to the cheap gas that is available. The movement is expected to conserve part of the gas production of the Signal Hill oil field, a large part of which at the present time is going to waste.

### COMPLETING GAS LINE

The Hope Engineering & Supply Co. has completed about half of 20 miles of 6-inch gas line which the company is laying from Thermopolis, Wyo., to the Golden Eagle Dome in the same State. The company also has a force of men laying gathering lines in the field and distributing lines in Thermopolis. The construction work is in charge of C. D. Hupp, from the Tulsa office of the company.

### WAURIKA, OKLA., WANTS GAS

WAURIKA, Okla., Sept. 4.—The City Council has sent Mayor C. S. Storms and former Mayor G. A. Nelson to Dallas to confer with officials of the Lone Star Gas Co. with reference to a project on foot here to secure natural gas from one of the Lone Star's mains in this territory. The city officials have had some assurances that a deal can be made. The town is on the eve of an era of growth due to the building here of a branch of the Burlington Railroad from Byars, Tex. W.F.K.

### MORE GAS FOR HOWARD

HOWARD, Kans., Sept. 2.—Announcement has been made here that the U. S.-Mex Oil Co. will lay a gas line from this city to the gas field 10 miles northwest of here for the purpose of furnishing gas for industrial and domestic use. It is understood that the company has contracted with the Arkansas Natural Gas Co., covering the entire gas output of the new field. In addition, the company also is preparing to drill two tests for gas near Elk Falls.

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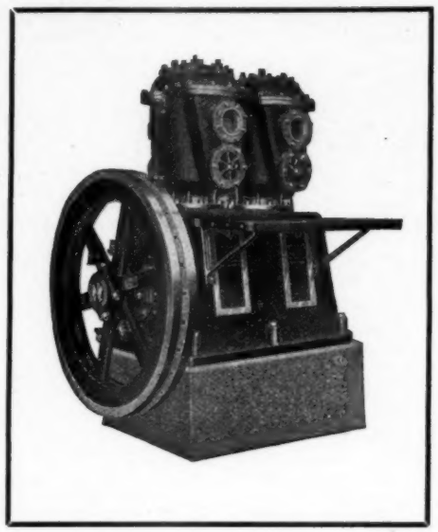

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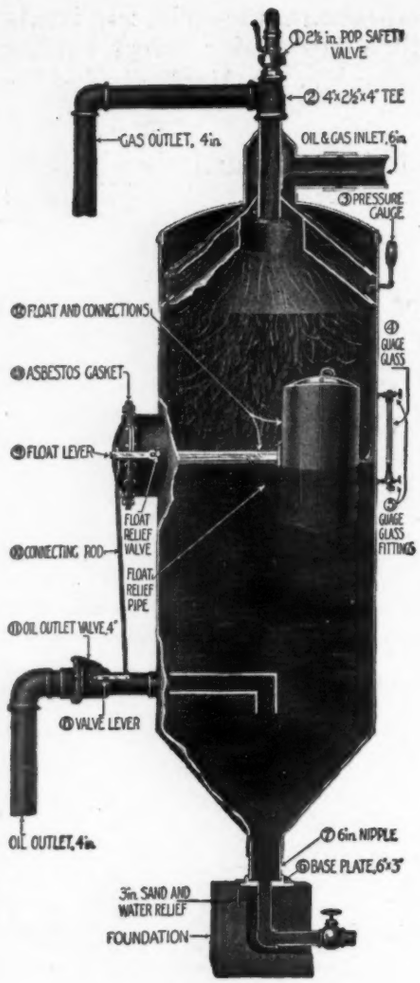


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# GEOLOGISTS' REPORT ON THE KEVIN-SUNBURST FIELD, TOOLE CO., MONT.

The following report on the Kevin-Sunburst Field in Toole County, Montana, is made by the United States geological survey from the results of an examination by the government geologist:

The district known as the Kevin- Sunburst oil field lies in Toole County, Montana, about 20 miles north of Shelby and 10 miles south of the Canadian boundary at Sweetgrass. The district is easily accessible, for a branch of the Great Northern Railway leaves the main line at Shelby and runs north through Kevin, Sunburst and Sweetgrass. It is perhaps a little premature to call the district an old field, for up to August 2, 1922, only two wells have yielded oil enough to justify operating them.

The possibility that the Sweetgrass arch would yield oil was pointed out by Eugene Stebinger in Bulletin 641 of the United States geological survey, Department of the Interior, published in 1916, but the area remained untested until 1922, except by a few poorly located holes, none of which went deep enough to test the possibility of getting oil in the Madison limestone and the beds just above it. Oil was first struck in March of this year by the Gordon Campbell well, in Section 16, Township 35n, Range 3w. The success of this well, soon afterward followed by the successful completion of the Sunburst well, in Section 34, Township 36n, Range 2w, aroused great excitement, and by July 1 there were 20 derricks in the field, although the two wells mentioned had produced not more than 2,000 bbls. of oil.

In May and June a part of the area was examined by A. J. Collier and W. W. Boyer of the United States geological survey. The results of their examination are briefly given below. This examination by no means covered the entire Sweetgrass arch, but it did cover an area measuring about 24 miles from north to south by 18 miles from east to west, which included the structural feature that seems to have caused the localization of the oil in the Kevin-Sunburst Field.

### Geography

The field lies in a treeless plain. North and west of it is a bold escarpment formed by the Virgelle sandstone. Much of the surface is covered by gravel and boulders or by lake deposits, the result of the invasion of the area by glaciers. Attempts at "dry farming" have been defeated by a succession of very dry years, in which the crops have failed, and the houses of most of these pioneers stand abandoned.

There are no permanent streams. Water for drilling is collected in reservoirs made by damming gullies and canyons, and water for domestic use is either collected in cisterns or is brought in by rail. Nearly all the water obtained from the few shallow wells that have been sunk is too alkaline for domestic use.

Before the first producing well was brought in the drilling was done with coal hauled from a mine on the south side of West Butte, in the Sweetgrass Hills, or with crude oil from Cat Creek or Wyoming. The fuels now used are oil and gas from the wells that have been completed.

### Stratigraphy

The formations in the field are described below in the order in which they occur, beginning with the most recently formed beds.

Glacial drift.—The drift consists of sand, boulders, and clay, and at some places reaches a thickness of 200 feet. It covers the surface so completely that little of the underlying rocks can be seen.

Virgelle sandstone.—The Virgelle sandstone, of Upper Cretaceous age, is about 200 feet thick. It is hard and crossbedded. The formation is not found within the field but forms a prominent escarpment or "rim" on the north and west.

Colorado shale.—The Colorado shale, of Upper Cretaceous age, is about 1,750 feet thick. Practically all the wells now being drilled in the field start on the Colorado shale, which is the lowest formation exposed there. The details of its character are of particular interest to the geologist, for his conclusions about the structure of the field are based upon work done with certain beds in this formation.

The upper part of the formation consists of shale containing many fossiliferous concretions of light-gray limestone. About 650 feet blow the top is a sandy layer about 50 feet thick, in the upper part of which is a thin layer that contains small pebbles of black chert. The pebble layer is commonly about a quarter of an inch thick, and associated with it in many places are thin layers of sandstone containing fish scales. This bed has been found on the north, west and south sides of the field, but not on the east side.

Below this sandy layer is 300 feet of blue-black shale containing zones of concretions. A zone of lime concretions about 60 feet below the pebble band shows the dip of the beds very satisfactorily in at least three widely separated localities. In the region east of Kevin and along the railroad between Kevin and Aloe the dip of the beds below this zone of lime concretions can be determined by means of bands of clay ironstone concretions.

About 350 feet below the pebble band is a sandy shale consisting of alternating layers of thin wavy shale and hard sandstone, which the prospectors in this region call the Mowry shale, although it has not the appearance of the typical Mowry shale. The core of the Bigwest well, bored with a diamond drill, shows that this member is about 50 feet thick. The beds are exposed on Raglan Butte, in Section 13, Township 33n, Range 2w, and south of the Troy-Sweetgrass well, in Section 21, Township 33n, Range 1w. Near the base of this member is a conglomerate from 2 inches to 1 foot thick, which contains small pebbles somewhat similar to those in the upper band of pebbles.

The remainder of the Colorado shale consists of blue and brown shale, thin layers of bentonite and sandstone. A bed of sandstone about 100 feet thick near the base of the formation is provisionally correlated with the Cat Creek sand. The core from the Bigwest well shows near the base of the Colorado a bed of conglomerate 6 inches thick, consisting almost entirely of chert pebbles cemented with lime.

Kootenai formation.—The Kootenai formation, of Lower Cretaceous age, is apparently about 420 feet thick. It comprises sandstones and vari-colored shales. Where exposed around the Sweetgrass Hills most of the Kootenai is a dark rusty brown, contrasting sharply with the yellowish-green of the underlying Ellis formation.

Ellis formation.—The Ellis formation, of Upper Jurassic age, is from 150 to 200 feet thick. It consists of yellowish-

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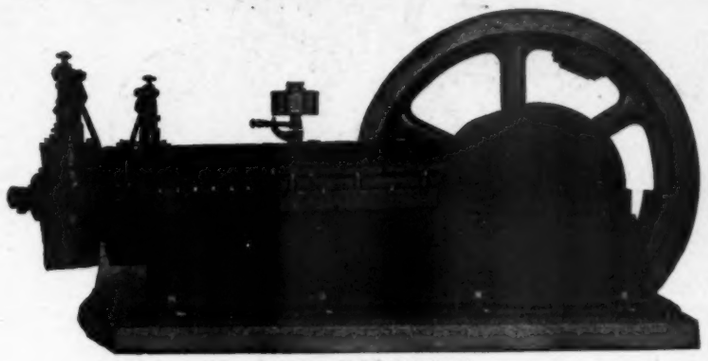

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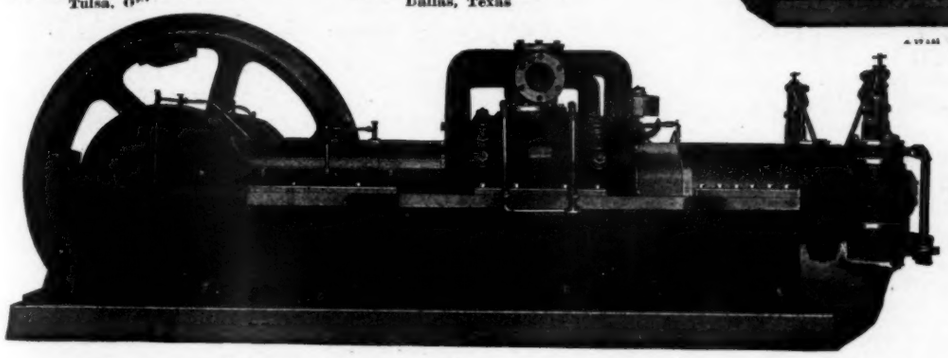

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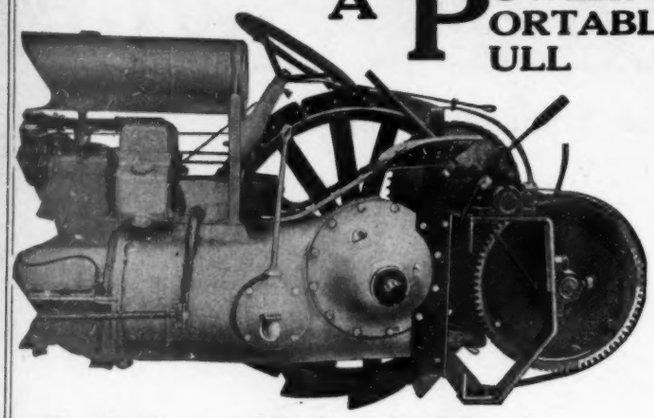

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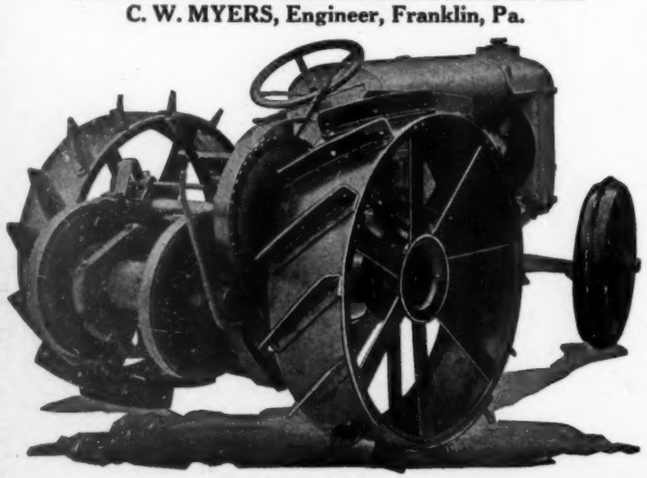

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green calcareous shale and interbedded shaly limestone. In two of the deep wells in the Kevin-Sunburst Field there is reported to be from 4 to 10 feet of oil-stained sand just above its contact with the Madison. The Troy-Sweetgrass well, bored with a diamond drill, found no sand at this horizon, but about 4 feet of cavernous limestone.

Madison limestone.—The Madison limestone, of lower Mississippian age, is about 600 feet thick. Between it and the Ellis formation there is an unconformity which on the south, near the Wyoming line, is occupied by the Chugwater, Embar, Tensleep and Amsden formations. Both in the Sweetgrass Hills and in the only well in the field that has been drilled deep into the Madison limestone, that formation appears to be massive limestone throughout. In the well referred to a black shale is reported at the base of the limestone, but this shale probably belongs to the underlying Devonian.

Devonian. — In the Kevin-Sunburst Field the Devonian is probably represented, at least in part, by black shale.

### Structure

A very broad dome with few irregularities occupies most of the field. Its form is shown by means of 50-foot contours on the structure map accompanying this report. Its highest point, near the Troy-Sweetgrass well, is only about 500 feet, structurally, above the Campbell and Sunburst wells, which are more than 10 miles away.

It is not to be expected that this broad dome will be productive throughout. A number of distinct pools may be found on it, their locations having been fixed by particularly favorable conditions of porosity and possibly by minor crumpling in the oil-containing formation. These formations include the Colorado, Kootenai, Ellis, Madison and perhaps the underlying Devonian.

### History of Exploration

A well on the James Miller ranch, Section 25, Township 34n, Range 4w, described by Stebinger in Bulletin 641 of the United States geological survey, reached a depth of 1,755 feet. Three small flows of gas from the upper part of the Colorado shale were reported but neither oil nor gas from the Kootenai. Mr. Miller also affirms the discovery of a showing of oil less thand 300 feet from the surface in a shallow well. When the lands were taken up by farmers small flows of gas came from a number of shallow wells drilled for water. One of these wells was in Section 11, Township 33n, Range 2w.; another was in Section 21, Township 34n, Range 1w, where the Troy-Sweetgrass well has since been drilled.

The first well to report commercial production was the Gordon Campbell well, in Section 16, Township 35n, Range 3w. This well has a flow of gas, probably from 500,000 to 1,000,000 cubic feet a day, from the sand at the base of the Colorado and a showing of oil near the top of the Ellis formation, 200 feet above the Madison limestone, and it reached the productive oil pool in a sand 10 feet thick just above the massive Madison limestone. The well stood idle from March until June, 1922, when about 100 bbls. was pumped from it in one day. Its yield is estimated at from 5 to 10 bbls. a day.

The Sunburst well, in Section 34, Township 36n, Range 2w, was completed early in June, 1922. It encountered gas in the sand at the base of the Colorado shale. The productive sand is in the Kootenai formation about 325 feet below its top. The first day of steady pumping yielded about 200 bbls. After a month of steady pumping the well was estimated as good for 50 bbls. a day.

In July, 1922, 3 wells slightly higher on the structure than the Sunburst well and not more than half a mile south of it reached the sand in the Kootenai that yields the Sunburst oil, but in all three this sand yielded gas without oil. One of these wells, on the Barr lease, is reported to have flowed 3,000,000 cubic feet of dry gas a day.

Drilling of the Troy-Sweetgrass well, in Section 21, Township 34n, Range 1w, began 300 feet from the surface in an old water well that had yielded some gas. At 219 feet above the Madison limestone a show of oil was found in a coarse sand. The top bed of the Madison was slightly cavernous and carried oil, and for 600 feet the limestone core from the diamond drill showed many fissures filled with oil. Tests with carbonn tetrachloride showed the presence of free oil in the Colorado shale also, and an odor of petroleum can be detected on almost every piece of drill core from the Madison limestone.

A showing of oil was reported from the Colorado shale in the Lewis well, in Section 14, Township 35n, Range 3w, at about 700 feet below the surface. Oil has therefore been found in the Colorado shale, in two or three horizons of the Kootenai, in the Ellis and in the Madison limestone.

### Character of the Oil

The oil from the Kootenai has a dark color, an odor like gasoline, and a gravity of about degrees. That from the Ellis and Madison is nearly black, has a sulphur odor, and a gravity of about 30 degrees.

### Significance of This Occurrence

The discovery of oil in the comparatively flat-lying strata of the Sweetgrass arch shows that sharp anticlinal folds are not absolutely essential for the accumulation of oil in the Rocky Mountains. There can remain no doubt that gentle folds such as those that yield oil in the Mid-Continent region, should be examined, particularly for oil in strata older than Cretaceous.

If the Kevin-Sunburst area proves to be an extensive and valuable oil field, regions of similar structure in Montana should be thoroughly propsected. Probably the Bowdoin Dome, in Valley and Phillips Counties, offers conditions more like those on the Sweetgrass arch than occur elsewhere in Montana. The Porcupine Dome, in Rosebud County, is another uplift of the same general type as the Bowdoin and Sweetgrass uplifts, although it is much smaller than either.

## PIPE LINE STATISTICS

The following table shows the runs and shipments by the various pipe lines in the oil fields of New York, Pennsylvania, West Virginia, Kentucky, Tennessee, Ohio and Indiana:

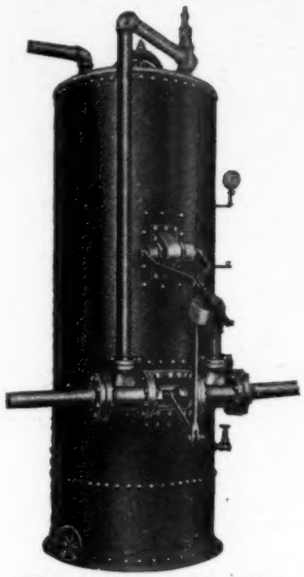
**Runs—August 1 to 27, Inclusive**

| | |
|---|---|
| National Transit Co. | 195,902 |
| South West Pa. Lines | 79,315 |
| Eureka P. L. Co. | 383,330 |
| Buckeye P. L. Co. (Lima) | 118,575 |
| Buckeye P. L. Co. (Macksburg) | 223,780 |
| Cumberland P. L. Co. | 315,989 |
| Indiana P. L. Co. | 15,356 |
| New York Transit Co. | 13,869 |
| Tide Water Pipe Line (Pa. oil) | 126,032 |
| Tide Water Pipe Line (Ill. oil) | 22,616 |
| Total | 1,494,764 |
| Average runs | 55,621 |

**Shipments—August 1 to 29, Inclusive**

| | |
|---|---|
| National Transit Co. | 486,342 |
| South West Pa. Lines | 241,707 |
| Eureka P. L. Co. | 88,475 |
| Buckeye P. L. Co. (Lima) | 142,090 |
| Buckeye P. L. Co. (Macksburg) | 319,750 |
| Cumberland P. L. Co. | 95,918 |
| Indiana P. L. Co. | 10,072 |
| New York Transit Co. | 11,276 |
| Tide Water Pipe Line (Pa. oil) | 367,501 |
| Total | 1,763,131 |
| Average shipments | 62,862 |

# Lorraine Gas and Oil Automatic Separator



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In actual tests, the Lorraine Separator has conclusively demonstrated its superior saving qualities, viz:

1. Reduces to a minimum loss through evaporation.

2. Increases production by producing a steady flow of oil.

3. Puts clear gas into the gas line, clean oil into your tanks, base sediment into the sump.

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These results are all accomplished without putting a back pressure on your well.

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INSTALL A LORRAINE Separator and materially increase the earning capacity of your well.

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## TEXAS CO. EMPLOYES AND FAMILIES ENJOY PICNIC

By FRANK REID

IOWA PARK, Tex., Aug. 30.—Perhaps one of the most enjoyable affairs ever given by any of the oil companies in this section was the picnic on August 30 of all departments of The Texas Co. operating in the North Texas division. The picnic was held in the Old Settlers Grove near Iowa Park, an ideal place for such a gathering.

Several weeks ago, the idea was conceived that such an affair had never been held and that it was time the employes of the different departments, their families and friends became better acquainted, so plans were made and brought to a successful conclusion.

The superintendents of the various departments headed the committees on arrangements.

One of the best barbecueists in this section, Mr. Landrum, of Petrolia, made all arrangements for preparing 700 pounds of beef, and to say that he can prepare barbecued meat to the queen's taste would be putting it mildly. It was par excellence.

Six cases of lemons went into five barrels of iced lemonade.

Above all were the arrangements made for music and dancing. A 40x60 platform was erected for the dancing and 20 of the boys of Maskat Temple Band, from Wichita Falls, dispensed entrancing music during the day for the dancers. Every dance ever invented was indulged in from the modern to the square dance, the Paul Jones taking a good lead, with Dan Gribbon as the leader.

At 3 o'clock the baseball team played the Electra team and trimmed it to the tune of 9 to 2. Then dancing was resumed until 6 o'clock, the end of a perfect day.

The families of the employes brought well filled baskets and groups of merrymakers were to be found here and there in the shade.

The affair was a wonderful success in every way, and to those who served diligently on the committees many thanks are due, and to J. L. McMahon, the general superintendent in this division of the producing department, thanks for his initiative in the matter, and the officials at Houston, who heartily endorsed the move, the appreciation of the employes for their financial co-operation.

## GASOLINE CARS ON RAILROAD

CHATHAM, Ont., Sept. 1.—Canadian railroads are experimenting with the use of gasoline cars. Recently a gasoline passenger car built at Wabash, Ind., for the Canadian National Railways arrived in Canada under its own power. It is being disp'ayed at the Toronto Exhibition prior to being put into service on the run between Trenton and Picton, Ont. The car weighs 14 tons, cost $16,000 and can make 30 miles or better with a trailer coach, each carrying 40 passengers. In the Canadian West, the Pacific Great Eastern Railway, owned by the British Columbia Provincial Government, is experimenting with new types of gas cars which may be put in use on lines where the traffic does not warrant running heavy locomotives. V.L.

## PRAIRIE CLAIMS THIS IS CRUDE OIL IN TRANSIT

WALTERS, Okla., Sept. 4.—The tax assessor of Cotton County has estimated that the Prairie Oil & Gas Co. has 453,292 bbls. of oil in storage on the company's farm in Cache Township. This oil, the company contends, can not be taxed because it is considered in transit. Were it taxed, it would add $679,863 to the taxable wealth of the county. The total of taxable property listed by the assessor is $13,569,585. Farm values total $6,639,237; corporation values, $3,600,964; city property values, $1,766,661, and personal property values, $1,552,723. W.F.K.

## KOSSE IS REPEATING OFT-TOLD STORY THAT GOES WITH NEW POOLS

Bad checks, bounding prices and suddenly enriched land-owners are included in the great flurry that has followed the coming in of the Humphrey Oil Co.'s wildcat at Kosse, Tex.

Among the companies which have already bought into the new field are the Gulf Production Co., which bought 103 acres 2 miles southwest of the well; the Owenwood Oil Co., which bought 10 acres 1 mile southwest of the well, and The Texas Co. and Humble Oil & Refining Co. All these interests have procured close-in acreage at prices ranging from $200 to $1,250 an acre.

One of the most favored by fortune because of the new well at present is L. Suttle, a farmer, who owns 900 acres of land near the well and is reported unwilling to relinquish any of it at a price less than $1,000 per acre. A gauger for the Sinclair Crude Oil Purchasing Co. who, with his wife, owns two acres in the town of Kosse, is reported to have refused an offer of $4,000 per acre and to be holding out for $5,000.

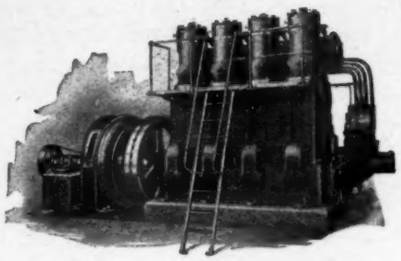
"Lease grafters," who flooded the area immediately upon the bringing in of the well, are said to be partly responsible for the temporary ballooning of acreage prices because of the payment with "sour" checks of from $1,400 to $2,500 per acre. But their consequent inability to turn the leases over to buyers before the checks reached the banks, has in some cases already resulted in lower prices.

## FUEL ADMINISTRATOR IS GIVEN CZAR-LIKE POWERS

ALBANY, N. Y., Aug. 29.—Governor Miller signed late this afternoon the fuel administration bill which had been passed by the Legislature in extraordinary session earlier in the day without a dissenting vote in either House. Under the new measure, the Fuel Administrator appointed by Governor Miller will have absolute power over all fuel, except gas and electricity, in the State. He may buy, sell, apportion, and seize when it is hoarded, all coal, coke, charcoal, firewood and fuel oil. He may limit the production of light, heat and power. He may look at the books and fix maximum prices of fuel dealers. He may even close schools if necessity demands.

## NEW PIPE LINE TO WALTERS

WALTERS, Okla., Sept. 4.—The Wichita Pipe Line Co. has begun laying a 6-inch line from Walters to Empire City, in the Duncan Field, a distance of 22 miles. A pumping station will be installed on Beaver Creek and a substation at Empire City. It is believed that the line ultimately will be extended to Wichita Falls, Tex.



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No stuffing boxes on injection pump plungers.
Symmetrical cylinder heads and flat top pistons.
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No mechanically operated valves except check valves.
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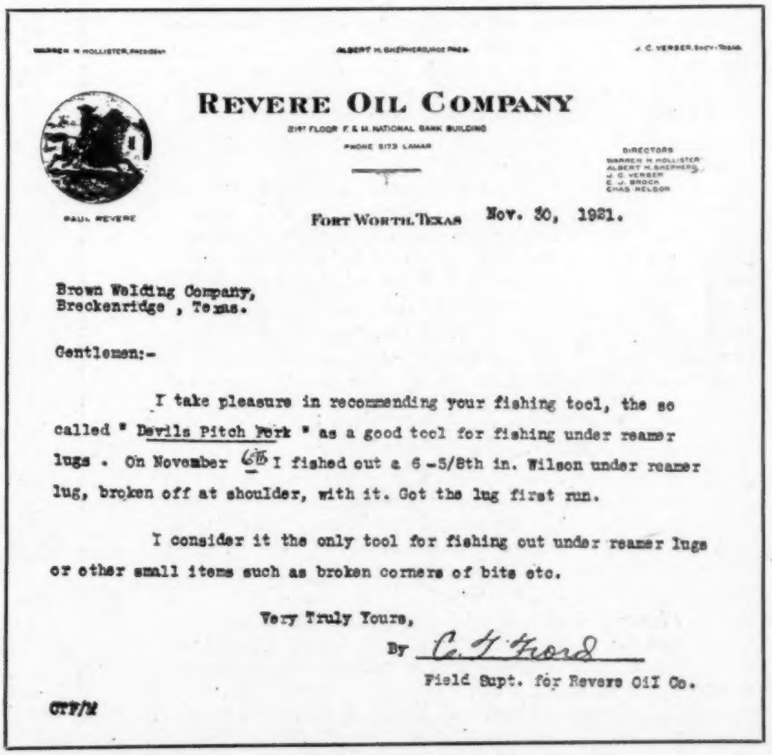

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Very Truly Yours,
By C. T. Ford
Field Supt. for Revere Oil Co.

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*Blueprint sketch and insert photograph of G. T. M. specified Goodyear Conveyor Belt in service in the plant of The Independent Sugar Company, Marine City, Michigan*

# The Sugar-Beet Acids— and the G. T. M.

*"This is the belt* we were looking for from the day we opened the plant," said the Superintendent of The Independent Sugar Company, Marine City, Michigan. He was referring to the Goodyear Conveyor Belt specified by the G. T. M.—Goodyear Technical Man—after an expert analysis of the Company's service requirements.

*"It satisfies us thoroughly,"* is the final verdict. "It has served through two successful campaigns since October, 1920, is in splendid condition today, and judging from its appearance, should last five more campaigns. It has withstood the destructive action of beet juices, has been easy to keep clean, and shows little sign of wear. We wish that every sugar man could know how our belt troubles have been solved."

*The acids in beet juices* make short work of ordinary conveyor belts. The Independent Sugar Company spared no money trying to find belting that would resist these acids and withstand the heavy edge wear developed in this type of conveying. The belting problem was costing them time and money, not only in frequent replacements, but also in frequent interruptions in the work of the entire plant.

*The G. T. M. and the Plant Superintendent* went over every point in the problem. They fitted together the practical knowledge of the Company's officials with their own conditions of service, and the G. T. M.'s expert knowledge of belting. The result was the G. T. M.'s recommendation of a special Goodyear Conveyor Belt, 180 feet long, 12 inches wide, 5-ply in thickness, with 1/16 inch cover.

*How it has served* efficiently and economically has been told in the plant superintendent's own words. In its first 100-day campaign, it carried 50,647 tons of sliced beets; in the second, 47,890 tons. It is exposed to year-'round weather conditions in a variable climate, and in winter carries tons of frozen beets. It has resisted edge wear.

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GOODYEAR

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# SAFETY MEASURES IN OIL INDUSTRY

## Bureau of Mines Working on Plans for Improving Conditions in the Field and in Transportation and Refinery, but It Needs the Co-Operation of the Oil Producers and Refiners in Order to Secure Results.

By Charles E. Kern

Washington, D. C., Sept. 2.—The United States Bureau of Mines has for two years been working particularly for the oil industry in attempting to introduce safety measures in the oil producing fields and in oil refineries and it has reached a stage in this work that calls for cooperation on the part of the entire industry. The time has arrived when this work cannot be intelligently pursued unless the Bureau is able to ascertain the causes of accidents. It must have statistics showing what kind of accidents are most prevalent, and, at this time, most of that information is hidden in the files of the accident companies that are largely operated by the large oil companies for their own benefit.

Just what plan would best serve this purpose has not been determined and for that purpose suggestion and cooperation is invited. What the Bureau of Mines has done for the coal and metal industries in eliminating accidents is so well known that it is hardly a subject for discussion. In this work, it has been preeminently successful. The statistics in this respect speak for themselves. During the 11-year period, from 1911 to 1921, inclusive, the number of major disasters decreased from 15 in 1911 to 5 in 1921; the number of killed in major disasters decreased from 413 to 34; the average number of killed by each major disaster decreased from 28 to 7 and the percentage of total number killed by all causes decreased from 15.5 to 1.7.

These decreases, with a few exceptions, were constant from the first year of the period to the last year. During that period, the Bureau was from year to year perfecting its methods of accident prevention, one of the essential features of which was a study of the kind of accidents that most often occurred so that attention might be fixed upon them. Instruction and safety machinery went hand in hand in their efforts. Focussing attention upon the great causes of the majority of accidents, inventive ingenuity did much to devise both apparatus and methods of prevention. Today casualty insurance and employes liability insurance are largely affected by this preventive work so far as rates of insurance are concerned.

There was no difficulty in obtaining statistics showing the kind of accidents that most frequently occurred. State legislatures recognized the hazards of the coal and metal industries and laws were passed establishing state mining departments and a requirement of these laws was that all accidents should be reported to that department. Many states have laws requiring the reporting of accidents of all classes, in fact 42 states have either compulsory or elective systems for reporting accidents and only six states have no such laws, only one of the six, Arkansas, being an oil producing state.

However, only in the state of California, among all the petroleum producing states, is there a compulsive compensation law, having relation to accidents in all industries so that in that state alone among the oil states are there complete reports of accidents in the oil industry, both producing and refining. Any accident in the petroleum industry would be reported at the office of the industrial commission at San Francisco and those statistics can be mde available to the United States Bureau of Mines in working out a perfected system for the prevention of accidents. Of course the fact that compulsory compensation laws have been so generally contested in the courts as unconstitutional has discouraged their passage in many localities, and in that way compulsory accident statistics have gone into the discard together with the law. But there are many other states in which a headquarters is maintained by the law for the gathering of such statistics so far as they may be voluntarily offered.

The greatest difficulty at this time in the gathering of adequate accident statistics in the petroleum industry lies in the fact so many of the large companies maintain their own insurance departments the records of which are not submitted to any public official or bureau and thus are not accessible for any national organization which seeks to get them together for the entire country. Under all of these circumstances the question arises as to what can be done to incite the entire industry to some uniform method for collecting all statistics of this kind? Such statistics would be guide to the Bureau of Mines for preventing accidents and in the course of a few years would become a source of great economy to oil producers and refiners, especially those that are liable for damages or that maintain private compensation departments of their own for the settlement of such claims. That would be sure to be the case if the experience of the coal and metal industries are repeated in the petroleum industry, and there is no reason to believe that the outcome would be any different as the problems are more or less the same.

The Bureau's activity in respect to safety appliances and methods in the coal industry dates back to December 1907, when the country was shocked with three terrific explosions killing 634 men, two of them being in Pennsylvania, and one in West Virginia. There was a hearing before the House Committee on Mines and Mining to inquire into the causes of these explosions in March, 1908, and in that year Congress appropriated money for an investigation of the causes of mine explosion and mining accidents. That led to the establishment of the Bureau of Mines in July, 1910. The activities of the Bureau have been so greatly enlarged since that time that the origin of the Bureau has been almost forgotten, but it gives a sound reason why the Bureau should at this time concern itself so vigorously in promoting similar work without the incentive of a national calamity to call attention to the need.

About two years ago the Bureau began to be active in the extension of its methods to the oil industry and the matter was taken up with the American Petroleum Institute by Director H. Foster Bain, Mr. Van H. Manning, director of research of the Institute, New York, being corresponded with, in a letter out-

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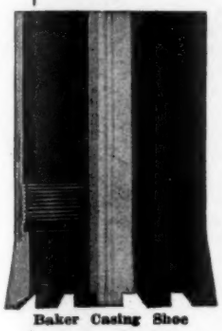

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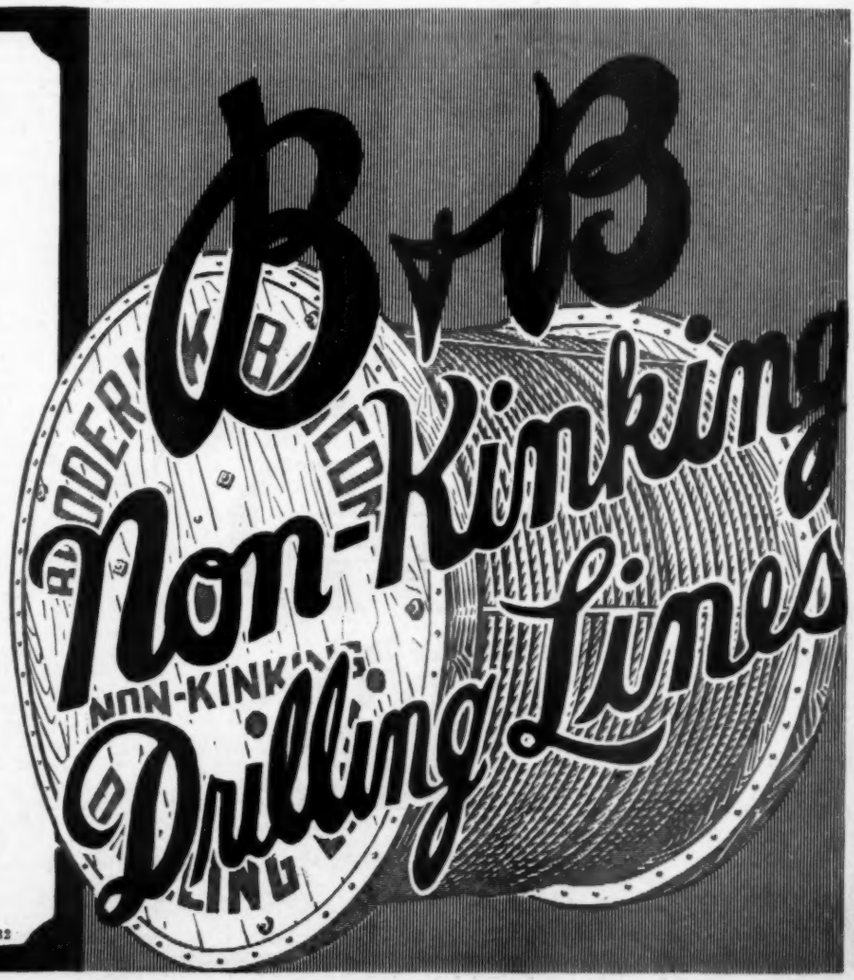

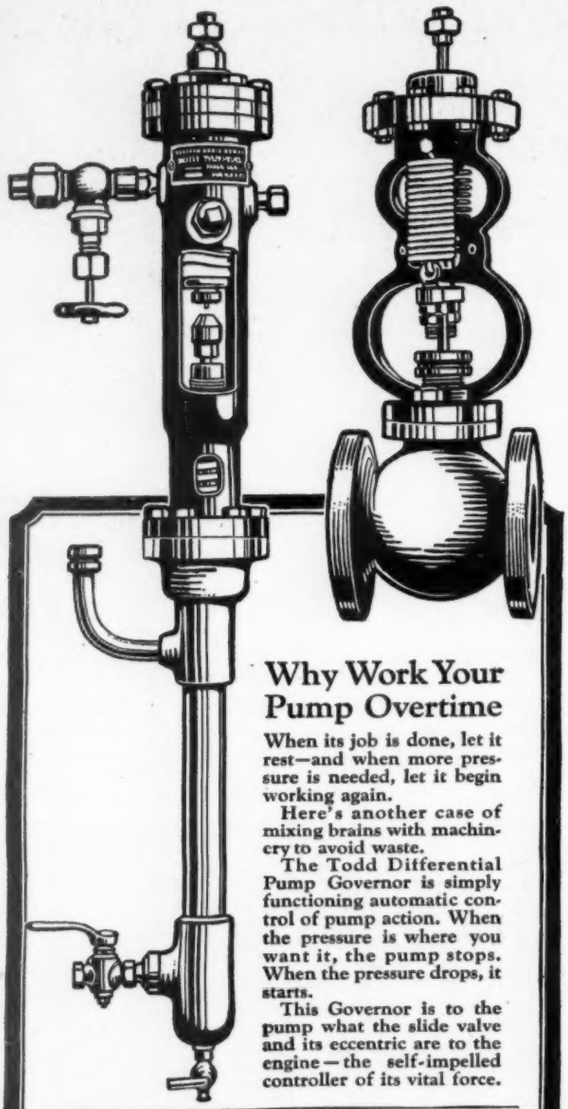

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lining the history of the Bureau's Mine rescue work, their safety and health work, how these activities have decreased the loss of life and property, effect on the cost of coal production and similar topics, all of which were familiar subjects to Mr. Manning who as director of the Bureau had been interested in this subject as an official. A conference between the several officials interested in this work was arranged in New York, May 22 and 23 of this year, when Mr. E. A. Holbrook and F. J. Bailey, of the Bureau, attended the meeting. This was a subject that was of interest to a government bureau in a double sense because the government itself is one of the largest owners of oil production in this country. At this meeting Mr. Holbrook outlined the chief ways in which the work at hand could be taken up:

**Ways and Means**

First, more effective laws or working rules.

Second, introducing safety appliances and methods.

Third, individual or safety education given directly to employes.

Fourth, by inducting safety incentives through economic factors bearing upon the state compensation laws. That a need did exist was shown by the fact that California in 1921 reported 20 deaths and 97 permanent disabilities and 763 temporary disabilities. The fact that in the prevention of accidents in coal mining was accomplished by organization and education and by safety appliances was enough to commend the plans to the Petroleum Institute. Two thirds of those results were obtained through organization and education and one third through safety appliances and it is probable that the same proportion will result in the petroleum industry.

Several methods have been suggested to make a beginning in the collection of petroleum statistics of accidents. States might strengthen their laws to include the reporting of such accidents where it is not now done and at the same time make the results available to the Bureau. The big companies might take the lead in reporting to the Bureau their accident statistics gathered by their private compensation insurance departments. Either plan would make a good beginning. The difficulty of building this plan upon reports from individual companies is shown by the fact that there are 200,000 oil wells in 24 states and 40,000 gas wells in 27 states. Of course if the industry would be willing to make reports the entire problem would be solved, but the large number of those who would have that duty thrust upon them would make it largely impractical.

**Industry Must Help**

One thing seems quite certain, until the Bureau can ascertain in some definite way what are the most frequently recurring accidents in the oil fields and in refineries they cannot intelligently devise methods or devices for lessening them. Without their restricted limitations the Bureau has not been idle in pursuing their work. Last year three of their 10 mine rescue cars carried instruction in accident prevention and first aid work throughout the oil regions. During that year 1,500 men were given thorough instruction with a course of lectures, demonstrations and examinations sufficiently thorough to warrant the giving to these men certificates showing their qualifications. Up to two years ago none of that work was done.

It must not be understood that the Bureau is entirely blinded to the causes of accidents in the oil industry. They have proceeded to assist in fighting the recurrences of such accidents in many ways. Take the shooting of nitro glycerine in wells as an example. Nitro glycerine in many localities cannot be received from a distance and it becomes necessary to make it in the field, thus adding an unnecessary danger, provided some less dangerous substitute can not be obtained for performing the same service. One question is to find a quick and powerful explosive that can be transported safely and exploded in wells with greater efficiency than nitro glycerine considering that ntiro glycerine often explodes before it reaches the bottom of the well, resulting in injury to the well and attendant loss. In California some producers have accomplished that to their satisfaction. They use an explosive gelatine there instead of ntiro glycerine and perhaps after more thorough trial this explosive gelatine will prove so satisfactory that its use will extend throughout the country.

**Accidents and Their Causes**

However there are many terrific refinery explosions and fires and no one knows just how they occur. Strange but true. That is one investigation that should be made and the reporting of such accidents with the attendant circumstances would promote a solution of the causes. There are accidents in the drilling of wells in connection with which it is pointed out that there is very little improvement in the methods of drilling over those that existed 20 years ago. All other class of machinery has been improved by the introduction of safety appliances but in the case of oil well drilling practically nothing has been done to promote safety. A special danger in oil well drilling lies in the fact that a great many people who have had very little experience undertake such work, very much more it is said than in many other lines of industry calling for skilled labor. Much less skill is required on the part of the men employed about the wells than is the case in the steel, copper, iron and coal industries. For that reason they are more liable to injury. As it is estimated that three fourths of all injuries in all branches of industry are preventable there seems to be no reason why that proportion should not apply to the petroleum industry.

There is a widespread interest in the safety promotion work of the Bureau of Mines, evidences of which appear on every hand. In the case of the Holmes Safety Association, safety chapters have been organized in all parts of the country. This association was named for the first director of the Bureau, Prof. Joseph A. Holmes. Such chapters are being organized in petroleum fields and much more in that line of prevention of accidents could be done as the work of the Bureau directed toward oil increases is advanced. Once having been instructed in the safety work of the Bureau the men who take its courses of instruction keep up their interest and add to their efficiency by joining these chapters with their attendant meetings. Even now all petroleum communities interested in this work can be guided by instruction and the institution of Holmes Safety Association by communicating with the Bureau officials.

The Bureau is promoting national and international mine rescue and first aid work and meetings of this kind are held annually, under the auspices of the Bureau. The fact that this work has thoroughly taken hold of the imagination of the people everywhere is shown by the fact that when the national meeting was held last year at St. Louis, Mo., 72 teams from 16 states and Canada, participated in the contests for prizes.

Even the moving picture is being draft-

(Continued on Page 112.)

Multiwhirl Exchanger

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It is run on the fishing string, the same as any other fishing tool.

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Enclosed herewith find our check for $700.00 in payment of the attached bill for one 8¼-inch Helrazer.

We succeeded in getting the last of the obstructions out of our well on the 15th day of July. The Helrazer did very good work in removing the small pieces of broken pipe and a slip from a casing spear that was pulled off in endeavoring to draw the 8¼-inch casing.

We are satisfied that this tool is an extremely good one to have on the job and, while we hope not to be called upon to use it again in our work, we are still of the opinion that we would not attempt to get along without having it in our fishing equipment.

Yours truly,

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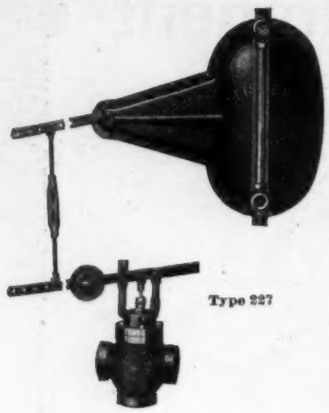


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# SURVEY OF NORTHERN OKLA. FIELDS

## First Chapters of a General Report Following a Survey by Ira Rinehart of Kay, Garfield, Noble, Western Pawnee, Western Osage and Grant Counties, Together With the Wildcat Territory in the Counties Named.

*Ira Rinehart, of Tulsa, has made a general survey and prepared a report on the producing fields of northern and northwestern Oklahoma, including the Ponca, Newkirk-Mervine and Blackwell Fields in Kay County; the Billings, North Billings and Tonkawa districts in Noble County; the Garber Field in Garfield County; the Morrison Field in Pawnee County; the Deer Creek Field in Grant County; the Burbank Field in Osage County, and the wildcat areas in and near the various districts mentioned, but more particularly in the western area. The Oil and Gas Journal will publish Mr. Rinehart's findings serially as the survey covers too much material to be given in one issue. The report was compiled after six weeks' work in the field, with the assistance of men who were willing and able to give Mr. Rinehart all the information necessary for a correct, comprehensive and interesting account of a part of the Oklahoma Field not as well known as the fields of the more easterly and southerly counties. The whole work of Mr. Rinehart is protected by copyright. In this issue two of the Kay County fields are reviewed.*

### THE PONCA FIELD

**Location**

The Ponca Field is located in Sections 4, 5, 8, 9, 17, 18, 19 and 20, all in Township 25, Range 2 east.

**History**

The North Central Oklahoma oil district was first discovered by the finding of a commercial oil well in the Ponca Field, of Kay County.

In 1908, in the month of December, E. W. Marland, a Pennsylvania oil operator, in company with Lieutenant, now Colonel, F. R. Kenny, of the U. S. regular army, made a visit to Kay County, to study the possibilities for oil. From that time until 1912, Marland made a close study of the geological features of the county. Shortly after arriving, he was attracted to the Ponca anticline, and after securing a lease from the Miller Brothers of the 101 Ranch, a well was started in February, 1909.

It was the first well to be drilled for oil west of the Osage reservation, and it was put down under the most adverse conditions. There were no heavy draft teams in the country, nothing but light horses and ranch ponies, so lumbering teams of oxen with their heavy wooden yokes had to be used to transport the rig timbers, tools, boiler and casing. The nearest supply house was at Tulsa, 120 miles distant. Because of the numerous handicaps, the well was never drilled to the producing sand. It was abandoned and another was started about 5 miles from it. The second well came in a gasser, that being in the spring of 1910.

About this time, in order to carry on operations on a large scale, Marland organized the 101 Ranch Oil Co., having associated with him W. H. McFadden, J. C. McCaskey, and a number of other friends of Pittsburgh, and Colonel F. R. Kenny. This company continued in operation in the Ponca Field until 1917 when it was absorbed by Marland Refining Co.

Eight gas wells were drilled before the first oil well was found. The ninth venture was the No. 1, Willie Cry farm, in the southeast quarter of Section 8-25-2e, which produced 20 bbls. natural from the 1,500 foot sand, and 120 bbls. after a 20 quart shot, and was still making 65 bbls. when two years old. It was completed in 1911, and marked the discovery of the first oil well in Oklahoma west of Range 7.

The Ponca 1,500-foot sand was developed during the years 1912-13-14-15-16 and in 1917 when Marland Refining Co. took over the entire acreage of the field from the 101 Ranch Oil Co., it developed the 2,100 foot sand. A year later, it developed the 3,800 foot sand.

Both the United States and Oklahoma geological surveys mapped the Ponca structure after it was found by Marland.

The outstanding feature of the field's development was the completion of the Marland Co.'s No. 6, George H. Brett, in June, 1919. It averaged 1,007 bbls. daily for the first year from the Wilcox sand, and is still making about 200 bbls. daily.

There are now 82 wells in the pool producing 1,350 bbls. daily, according to pipe line runs of June, 1922.

**Structure**

The structure is one of the most prominent of this area. It is rather difficult to map in detail but surface outcrops are sufficient to indicate anticlinal folding. Sub-surface map on any producing horizon shows a definite, prominent structure. Like Blackwell, the deeper formations show a more pronounced folding.

The axis of the anticline extends from near the center of Section 17, in a general northeast direction to the northwest quarter of Section 3. The highest point on the structure has an elevation of about 1,000 feet above seal level. Structural contours taken from the lower 1,500-foot sand show an east dip of at least 90 feet. Several saddles on the anticline are also noted in the southeast of Section 9 and in the southwest of Section 4. A cross-synclinal fold separates this structure from the Newkirk structure. Herington and Winfield limestones are exposed in the area, the former in Sections 8, 18 and 19, in Township 25, Range 2 east, and the latter in Sections 26, 27 and 34, in Township 26, Range 2 east, and in Section 3-25-2e.

The more pronounced markers for sub-surface mapping are the base of the red beds at about 700 feet, the 1,300 foot sand, 1,500 foot sand, 2,100 foot sand, 2,650 foot sand, and the top of the Mississippi lime at about 3,600 feet.

**Drilling**

All drilling is done with standard tools.

**Production**

A gas sand is found at 500 feet that sometimes shows as high as 1,000,000 cubic feet.

At 900 feet, another gas sand is found which is about 20 feet in thickness and yields 8,000,000 to 10,000,000 feet. Oil showings have also been encountered in this way.

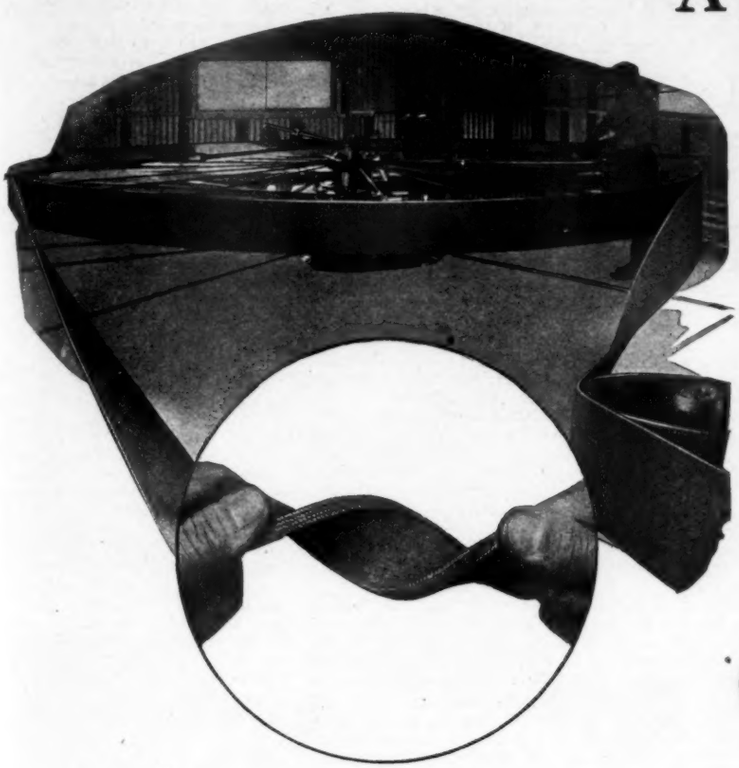
At 1,300 feet, a third gas sand is found, which is about 30 feet in thickness and yields gassers up to 10,000,000 feet. It carries water over most of the field, and showed some oil.

At 1,500 feet, is the Ponca sand, which is fairly continuous and productive over the higher part of the structure.

At 1,800 feet, is an irregular sand which is productive locally.

At 2,100 feet is one of the regular

# A Hard Job Made Easy



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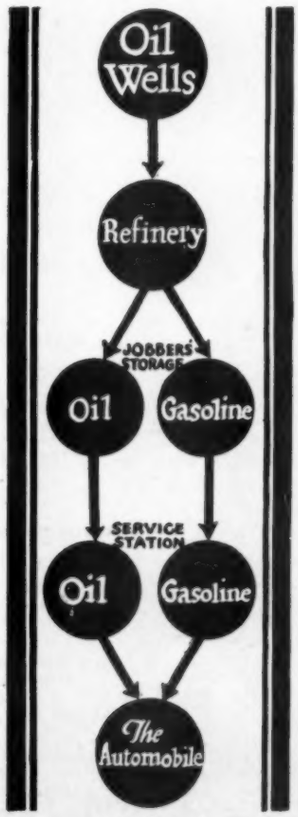


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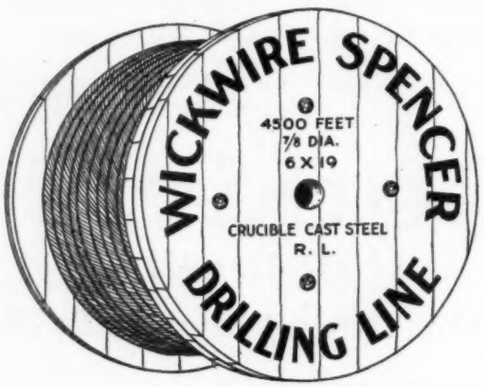


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**Stocks of Oil Well Lines Are Carried at These Points**


sands found over most of this general region, although varying in thickness. The best production in this pay is found on the south half of the structure.

At 3,600 feet, oil production is found on the south part of the structure, in the chat at the top of the Mississippi lime. Varying conditions of this chat govern its production. It is not a regular sand.

At 3,900 feet is the so-called "Marland" sand, which correlates with the Wilcox sand in eastern Oklahoma. The sand produces an excellent grade of oil and it is from this pay that the famous Brett well is producing.

**Quality of Oil**

The oil has a gravity of 40.6 and runs 38.5 per cent of 57 gravity, 437 end point gasoline or 39.7 per cent of 56.3 gravity, 440 end point gasoline, with 15.5 per cent of 40.5 gravity, 72 flash, kerosene, 13.6 per cent of 34-36 gas oil, 29.7 per cent fuel oil, and the loss is about 1.5 per cent.

The crude consists mainly of paraffin base with an exceptionally low asphalt and tarry materials. The lubricating distillates are exceptionally good for the manufacture of viscous and non-viscous neutrals, the oils having a low carbon residue, hilgh flash, and high gravity, equal to Pennsylvania neutrals. The crude very much resembles Tonkawa, being of light green color. It is of definite quality due to the field being settled, running low in b. s.

**Pipe Line Facilities**

The only pipe line into this field is the Kay County Gas Co., as Marland owns all of the production with the exception of one lease which is making from 2 to 5 bbls. daily from 3 wells.

**Future Prospects**

During last year (1921), there was an extension of the field to the south and the southwest, producers having been completed there in the 2,100 and 3,650 foot sands. These extensions are still not defined. There is little chance for deeper pay to be found in the field as the Wilcox sand is already producing.

## THE BLACKWELL FIELD

**Location**

The Blackwell Field is located in Sections 19, 29, 30, 31 and 32, in Township 29-1e; in Sections 25 and 36, in Township 29-1w; in Sections 4, 5, 6, 7, 8, 17, 18, 20, 30, 31 and 32, in Township 28-1e; and in Sections 1, 12, 13, 23, 24, 25, 26, 35 and 36, in Township 28-1w.

**History**

The first wells in the Blackwell Field were drilled by local parties. Much difficulty was experienced in drilling through the red beds so many wells were abandoned, but several showed from 200,000 to 5,000,000 feet of gas in shallow sands. In 1912, the north end of the Blackwell gas field was developed by E. W. Marland and associates, about 21 gassers having been brought in that year out of a total of 37 drilled by various parties. At this time the field was about a mile wide and extended north and slightly east for 10 miles. 1913 saw the development continue intermittently, but the real interest started in 1914 when a number of good gas wells and one oil well added stimulus to development. The gas wells had an open flow capacity from 250,000 to 35,000,000 cubic feet.

The first oil well was drilled by B. B. Jones on the Gus Swenson farm, in the northeast corner of section 32-29-1e. It made 600 bbls. from sand from 3,365-67 feet, and is still producing, making about 2½ bbls. daily. The next oiler was found by the Spencer Oil Co., it being on the Alberta farm, northwest of the Swenson producer. It made about 500 bbls. and was still making 400 bbls. at 3 months old. Following the Spencer, a deep sand gasser was drilled and then B. B. Jones found a 1,000-bbl. well at 3,373 feet in the northeast of Section 32-29-1e, southwest of the original well. The Duluth-Oklahoma Co., on a sublease of the Blackwell Oil & Gas Co., 1913, went farther south, in Section 1-28-1w, and drilled a well starting off at 2,000 bbls. and which produced 500,000 bbls. within a year. This was still higher up on the structure, and development from then on was rapid and continued southward where many sands from 1,800 to 2,300 feet were found productive. Eventually, production was extended 5 miles south of the original oil well.

By January 1, 1916, 24 wells were drilled with the intention of going to the "Swenson "sand. (So named in honor of the farmer on whose farm the first oil well was drilled). In March, 1916, the field was making 2,000 bbls. from 5 wells.

As the field was drilled, it was proven that the "Swenson" sand was not a very profitable proposition, considering the depth at which it was found, and operators sought extensions in shallower sands, which, as previously stated, resulted in the south extension being discovered covering Sections 7, 8, 17, 18, 19, 20, 29 and 30, in Township 28-1 east.

Production of the field at present is about 2,450 bbls. from 176 wells.

**Structure**

The Blackwell structure is very hard to map from surface indications because the outcrops are indefinite, being chiefly shale. Interbedded with these are three or four layers of more or less persistence, which with the shales above and below, were used by geologists as the horizon for contouring the surface structure.

The base of the Permian at about 700 feet and the 2,600 foot sand are the best key formations for subsurface mapping.

The structure on the deeper horizons are much more pronounced than the shallow horizons. The structure generally, is the result of considerable folding, as shown by divergence of certain formations off structure and the probable absence of some formations on the axis of the fold.

It is not known who discovered the structure, but it was mapped for the Oklahoma geological survey by L. E. Trout.

**Drilling**

All work is done with standard tools. Because of the difficulty first experienced with the cavy formations in standard tool work at the beginning of the field's development, several rotaries were put to work but they could not handle the hard limes and make satisfactory progress so favor reverted to the standard equipment.

**Production**

From 700 to 850 feet, a shallow gas sand is found producing up to 10,000,000 feet daily. This sand is productive along the west flank of the structure in the eastern part of 28-1w.

At 1,400 feet, another gas sand is found, which produces from 2,000,000 to 35,000,000 feet of gas.

At 1,600 feet, is a 20-foot sand, that yields oil wells making from 100 to 450 bbls. daily.

At 1,750 feet, is another oil sand, having an average thickness of about 15 feet and giving wells of from 100 to 1,350 bbls. capacity.

At 1,900 feet is a 20-foot sand that makes from 20 to 1,200 bbls. daily.

At 2,000 feet, is another sand that produces wells up to 1,000 bbls.

The 1,400, 1,600, 1,750, 1,900 and 2,000 foot sands are more or less irregular, bue were very productive on the southern part of the structure.

At 2,200 feet, is a gas sand, about 40 feet in thickness, which made average gas wells of from 5,000,000 to 20,000,

PARKERSBURG MACHINE CO.
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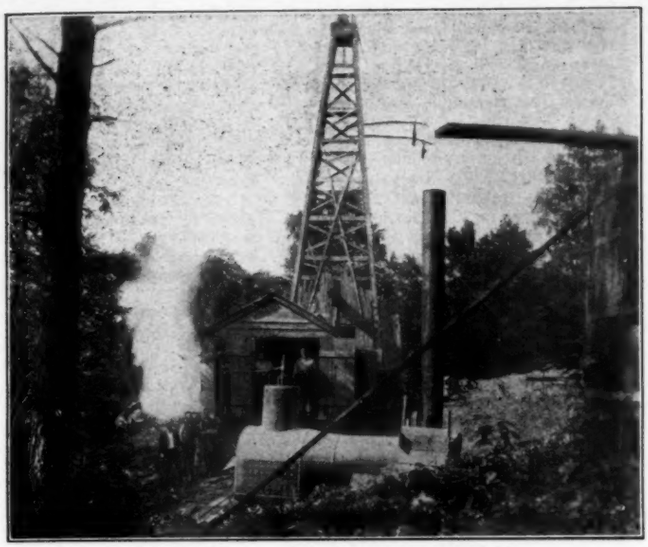
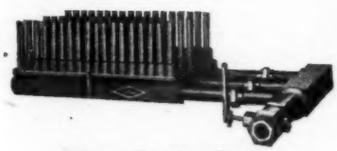
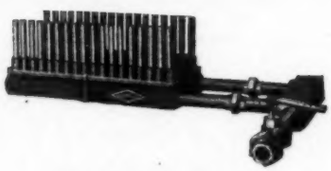


# Parmaco Burner Used to Drill 4,300 Feet

IT is a fact that this deep Hope Natural Gas Co.'s test at Sand Hill, Ritchie County, W. Va., was a failure. However, that was not the fault of the two-section Parmaco Low Pressure Boiler Burner which operated in connection with a 25 H. P. Donovan Boiler. It is phenomenal that this small outfit was capable of generating enough steam to drill this well to the depth of 4,300 feet especially when it is considered that the installation was not according to best practice.



Three-Section Burner



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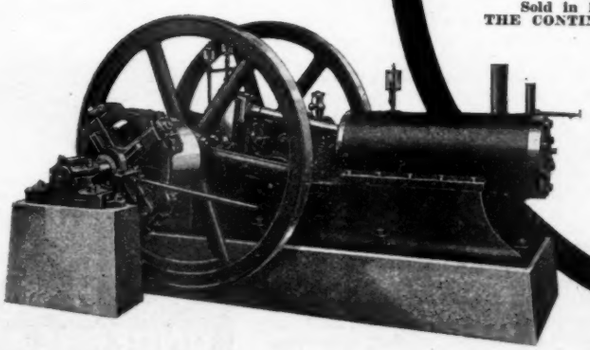

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000 feet, and some made as high as 30,000,000 feet.

At 2,600 feet, is a regular sand, 75 feet in thickness, that made gassers with sizes varying from 5,000,000 to 40,000,000 feet.

At 3,300 to 3,400 feet is the deep pay which is about 100 feet in thickness, and yields oil wells of sizes from 100 to 2,000 bbls. and gassers good for 3,000,000 to 45,000,000 feet.

While the 2,600 foot sand is remarkably continuous and is one of the two reliable key-beds for sub-surface contouring, the 3,300-3,400 foot sand is irregular in character, producing only over the high part of the structure.

**Quality of Oil**

Blackwell oil is lower in gravity than the Tonkawa, Ponca, Deer Creek, Garber and Billings oils, but has an excellent content and is a good premium grade. It runs about 38 gravity and an analysis shows it to contain about 38 per cent of 58, 440 end point gasoline; 12 per cent of 42 gravity, 140 flash, kerosene; 10.5 per cent of 34-36 gas oil; 38 per cent fuel oil, and the loss is 1.5 per cent. Although not quite as good, as the other grades above mentioned, Blackwell will compare favorably with Ponca crude. Like the Ponca, it is very low in sulphur content, is mainly of paraffin base, with an exceptionally low asphalt and tarry material content, and the lubricating distillates are good for the manufacture of viscous and non-viscous neutrals, having low carbon residue, high flash, high gravity, and other requirements that nearly equal Pennsylvania neutrals.

**Pipe Line Facilities**

Pipe lines entering the field are the Prairie Pipe Line Co., Empire Pipe Line Co., Globe Refining Co., Kanotex Refining Co., and Producers & Refiners' Corporation.

**Future Prospects**

The field has possibilities for extension, having not been definitely outlined on all sides. There is little chance for development of deeper sand, in the estimation of geologists, but in the south end of the field it is thought that many of the shallower wells may be drilled deeper to the 3,300-3,400 foot pay with good results.

Market conditions have held back deeper drilling, the acreage being so well blocked by certain owners or held by such conservative operators that they are enabled to hold the oil underground, if it exists, for a better crude oil price.

(To Be Continued.)

## SAFETY MEASURES IN OIL INDUSTRY

(Continued from Page 106.)

ed into the service of safety work in the oil fields. The first picture film for use in that connection is now being made through the cooperation of five of the larger oil companies of California. It is being made under the direction of Roy W. Kelley, safety engineer of the associated companies, in cooperation with the Bureau of Mines. When this picture is completed it will be placed at the disposal of communities desiring to show it as have pictures of a similar nature, such as the "Story of Petroleum."

The gas masks adapted to the petroleum industry are one of the devices that have been largely perfected by the Bureau quite recently. These masks reduce the danger of the lowering of men into tanks that have contained gasoline. The first attempts of this kind showed the necessity for a different kind of rubber than that ordinary satisfactory for use in gas masks used elsewhere. Gasoline readily dissolves and weakens a mask made of rubber so that experiment has been resorted to to develop a rubber that will resist this source of injury. That has been accomplished by the production of a better mask than has heretofore been known. A mask for the navy has been manufactured at half the weight and half of the cost of former products.

This entire matter of promoting safety in the petroleum industry will again come before the American Petroleum Institute. In the meantime it is desired by all those who have become interested in the subject to promote a widespread spirit of cooperation, because it is realized that whatever is accomplished must be through friendly assistance throughout the industry. Individuals or companies, large and small, that are inclined to promote this work should show their interest by communicating with the Bureau of Mines and as soon as plans have been formulated they will be called upon to lend aid. It will cost nothing beyond a little time and the results will rebound to the benefit of every one having an interest in the oil industry. Not only it will result in the saving of life and prevent accidents, but it has a pronounced economic aspect as well. Greater safety means cheaper production and refining of oil.

## *FILLING STATIONS IN RESIDENCE DISTRICTS*

OKLAHOMA CITY, Okla., Sept. 4.—Does a filling station affect the morals, good order, convenience, comfort, prosperity or general welfare of a community? Has the gasolinization of residence districts of cities reached the peak of its spread?

In Wichita Falls, Tex., the City Council has passed an ordinance providing that when an application is made for a permit to install a filling station, or other place of business, the application is to be referred to a board of review, consisting of three property owners. This board may summon witnesses, take testimony and make report of its findings. If the business sought to be established is objectionable, the council has authority to refuse to issue the permit, the applicant retaining the right to appeal to the courts.

This ordinance was designed to correct one formerly in effect on that subject which the Supreme Court of Texas held unconstitutional. The court held that a business building in a residence section could not be objected to on artistic or aesthetic grounds.

So the City Council widened the scope of complaints and provided that objection might be made if such a building affected the "morals, good order, convenience, comfort, prosperity or general welfare of residents of the community."

The Board of Deacons of the First Baptist Church, of Oklahoma City, have protested against the erecting of filling stations on Robinson Avenue between Sixth and Thirteenth Streets, holding that "Oklahoma City looks upon Robinson Avenue as being set aside as a church street."

Owners of property in residence districts in Oklahoma City have not obtained results from the court in such matters and the issue has become one of the livest affecting civic affairs in the entire State. W.F.K.

## A PRIZE FOR A NAME

SOUTH BEND, Ind., Sept. 2.—The South Bend Refineries, Inc., of this city, is offering a prize of $500 for a suitable name for its line of lubricating oils. The company recently completed a modern compounding plant. The results of the contest are to be announced in the near future.

## Panuco Heavy Oil Field Is Attracting Attention

NEW YORK, Sept. 4.—Since the encroachment of salt water in the Mexican oil fields has received such wide publicity in the United States during the last two months, attention has been turned largely to the Panuco Field, which yields a heavy oil containing a gasoline yield of around 5 per cent. This oil is useful chiefly as a fuel oil, for which the demand is increasing rapidly, due to the coal strike in this country.

In response to a call for information regarding the Panuco fields from the directors of one of the principal operating companies in Mexico, with headquarters here, its chief geologist compiled an illuminating report, based on reliable information obtained from private and official sources. This report gives production up to July 1 by companies, showthat the Freeport & Mexican Fuel Oil Co. (a Sinclair subsidiary), had produced the largest amount in that district, namely 27,459,310 bbls; while the Mexican Petroleum Co. was second, with 24,781,295 bbls. to its credit. The other companies which had produced more than 20,000,000 bbls. up to that time are: East Coast Oil (Southern Pacific Railway), 22,997,642 bbls; La Corona Oil Co. (Royal Dutch-Shell), 21,195,661 bbls, and Transcontinental Petroleum (Standard, of New Jersey), 20,251,876 bbls.

The report verbatim follows:

### Heavy Oil Fields of Mexico

The greatly decreased production of light gravity oil from the southern fields of Mexico brings in the foreground that part of the Republic where the first commercially productive wells were drilled, and which produced from 1904 to July 1st of the present year approximately 200,000,000 bbls. of so-called heavy oil. This area is commonly known as the Panuco Field, and extends from the outskirts of Tampico, along the banks of the Panuco River for a distance of about 30 miles.

This field is sub-divided into three pools, known as Topila, Panuco and Ebano. Ebano is the oldest of these pools and has produced over 16,000,000 bbls. of oil.

The average monthly production from the entire Panuco Field for 1921 was 3,757,000 bbls. The monthly average for the first three months of 1922 was 4,083,000 bbls. The increased production during the first three months of 1922 was due to the flush production from the Palangana Farm in the Panuco Sector, and the competitive efforts of the producing companies on the Isleta Farm to obtain maximum production before the intrusion of salt water compelled the closing in of these wells. Isleta is now practically exhausted, and the companies having reserve production in Salvasuchi, which until the coming in of Limon and Cacalilao, was the only known producing division of the Panuco Sector not affected by salt water, were forced to open up these wells to fill requirements.

The total production of heavy crude in June was 3,184,050 bbls., of which 2,935,516 bbls. came from the Panuco Sector; 99,911 bbls. from Topila; 51,570 from Ebano, and the balance from miscellaneous isolated spots like Chijol and Chila Salimas.

It is to be noted that production amounting to 782,522 bbls. from the reserve wells in Salvasuchi and Corona Co.'s No. 1 Cacalilao are included in the Panuco production figures. Deducting this amount from the total production of the entire field during June, it will be apparent that production from the old sectors has fallen off approximately 33⅓ per cent from the 1921 monthly average, and it is evident that Cacalilao and Limon have the only known sources capable of maintaining the present monthly average of heavy crude oil.

Summary of production by companies all northern fields:

**Summary of Production by Companies All Northern Fields**

| Company— | June, 1922 | Total to July 1 |
|---|---|---|
| Freeport Mex. | 206,029 | 27,459,310 |
| Mexican Petroleum | 146,748 | 24,781,295 |
| East Coast | 142,239 | 22,997,642 |
| Corona | 620,880 | 21,195,661 |
| Transcontinental | 444,863 | 20,251,876 |
| The Texas | 198,215 | 18,307,300 |
| Mexican Gulf | 158,871 | 11,847,087 |
| New England | 343,417 | 10,571,557 |
| Panuco-Boston | 106,766 | 5,645,762 |
| Tal Vez | 10,841 | 5,465,837 |
| Empire Gas | 82,980 | 4,777,830 |
| Mexico-Boston | 34,788 | 3,014,649 |
| Espuela | 159,974 | 2,236,895 |
| National Oil | 56,018 | 2,030,040 |
| Penn Mex | 1,972 | 1,805,551 |
| Tropical | 11,946 | 1,770,437 |
| Meridional | 57,703 | 1,742,484 |
| Mexican Atlas | 5,806 | 1,691,791 |
| White and others | 51,708 | 1,395,148 |
| Cosmos (Term'l Union) | 6,515 | 1,360,981 |
| Mexico y Espana (Caltex) | 27,914 | 1,326,167 |
| Normexus | 339 | 1,286,671 |
| Regiones | 1,737 | 1,274,545 |
| English Oil Co. | 17,010 | 1,193,465 |
| Mexican Fuel (Pierce) | 8,100 | 1,188,468 |
| Mexican Oil Co. | 8,590 | 1,151,153 |
| Picher-San Cristobal | ..... | 1,116,713 |
| Norman-Mex (Nibbl) | ..... | 965,917 |
| La Mexico | 12,835 | 799,960 |
| Hispano-Cubano | ..... | 481,517 |
| Panuco-Tuxpam | ..... | 422,839 |
| Universal | ..... | 389,182 |
| Mallory and others | 34,702 | 366,482 |
| Panuco Crude | ..... | 278,070 |
| Tampico Oil (Ltd.) | 1,875 | 262,353 |
| Thomas and others | 38,096 | 239,585 |
| Itamex | 73,641 | 202,220 |
| Maritima | 36,787 | 200,041 |
| Poblana Petroleum Co. | ..... | 124,707 |
| Jones & Buchanan | 14,337 | 104,717 |
| Tampico-Panuco Petroleum Co. | 4,627 | 96,557 |
| Monterrey Petroleum Co. | ..... | 75,126 |
| Continental Mex. | 20,640 | 64,104 |
| La Giralda | 14,484 | 54,945 |
| New York & Maguabes | ..... | 53,316 |
| Eureka Chautemoc | ..... | 52,395 |
| Campbell & Byrd | 15,409 | 50,854 |
| Mexicana del Golfo | ..... | 41,883 |
| Kern Mex. | 803 | 16,288 |
| Tillotson (Jones & Buchanan frac.) | 4,511 | 10,088 |
| La Republica | ..... | 1,893 |
| La Victoria | ..... | 1,815 |
| International Petroleum Co. | 234 | 1,098 |
| Total | 3,184,050 | 204,144,267 |

## UNCLE SAM ENRICHED BY OIL PRODUCING NEPHEWS

WASHINGTON, D. C., Sept. 1.—Total net royalties accruing to the Federal Government as the result of oil, gas and natural-gas-gasoline production from leased public lands in certain Western States amounted, on August 1, to $6,409,115, according to the United States Bureau of Mines, which has technical supervision of such operations. Royalties reported to the Government during the month of July amounted to $642,607. Of this amount, Wyoming is credited with $355,220; California, $269,889; and Montana, $17,498. Royalties for the production of oil formed the larger proportion of the July total, and amounted to $629,054; royalties for natural gas are reported at $10,857, and natural-gas-gasoline, 2,696.

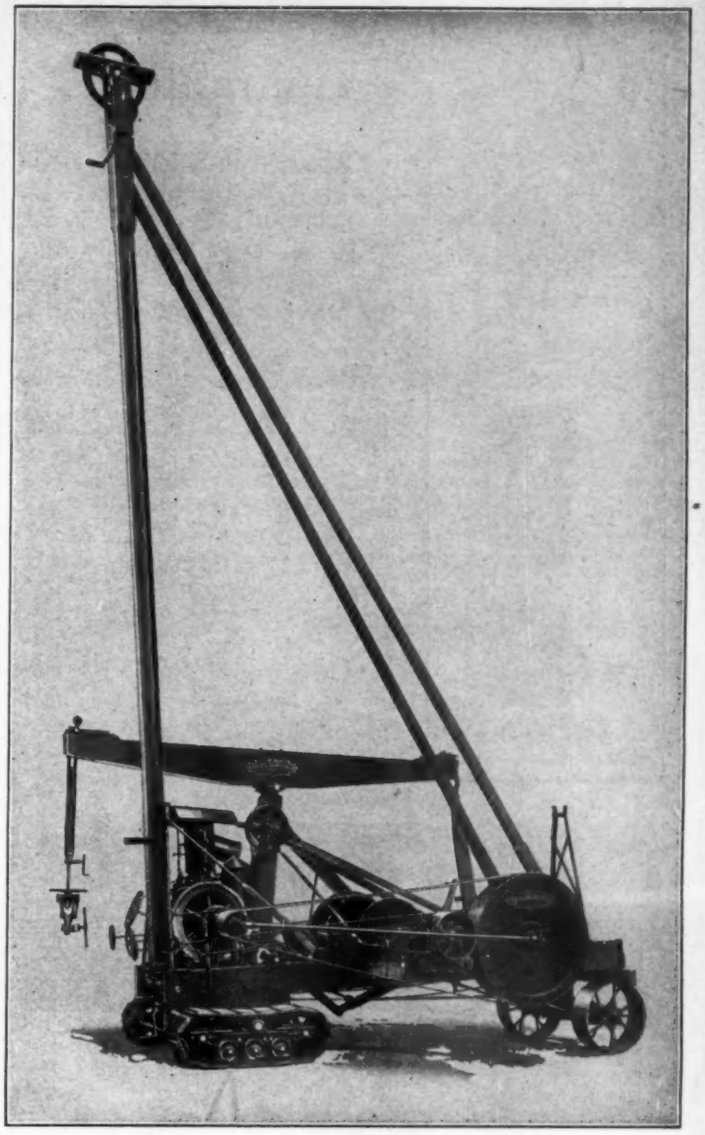
During July, 278 oil and gas prospecting permits were received by the Bureau of Mines, from the General Land Office and distributed to the respective field offices at Bakersfield, Calif.; Casper, Wyo.; Denver, Colo.; Shreveport, La., and Winnett, Mont. A total of 8,167 prospecting permits had been received August 1.

Recent declines in the price of crude oil are expected to decrease to some extent the value of royalties obtained from production on leased Government lands.

Recent drilling activities in the Kevin-Sunburst oil field in Montana indicate that oil in commercial quantities can be expected over a large area in this district in which the Federal Government is a large holder.

## AUTHORIZE CUMBERLAND P. L. TO FILE TARIFF REDUCTIONS

OIL CITY, Pa., Sept. 2.—The Cumberland Pipe Line Co., Inc., has been authorized to file upon notice five new tariffs reducing rates on the transportation of oil from points in Kentucky to Parkersburg, Pittsburgh, Ewing, Corapolis, Carnegie, Millerson, Franklin, Claretion, Tiona and Lacy Station. The reduction amounts to 5 cents a bbl. and became effective on August 29.

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This machine is making good not only as a driller but as a cleaning out machine in deep territory.

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**AKRON, OHIO**

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NO-CO-RO Balls and Seats and NO-CO-RO Drops and Seats are made from our own SPECIAL ALLOY STEEL and POSITIVELY WILL NOT RUST, CORRODE, PIT OR BREAK.

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# Sensing the Excellent

Honest value—a full dollar's worth for every hundred pennies invested in a device—can always be sensed. By simply holding the Wheaton Faucet in the palm of your hand, for example, you realize immediately that it is a product constructed from the finest materials; a product of the most exacting workmanship; a product worth every penny you have paid for it—in short, an honest product.

And when you finally make practical use of your Wheaton Faucet it will be proved that your judgment is correct—that you have sensed excellency.

**A. W. Wheaton Brass Works**

**Newark, N. J.**


# JULY PIPE LINE REPORT FOR KANSAS, OKLAHOMA AND THE EASTERN FIELDS

**OKLAHOMA-KANSAS**
**Pipe Line Statement for July**

**Runs**

| | Month | Daily Average |
|---|---|---|
| Prairie P. L. Co. (est.) | 4,464,000 | 144,000 |
| Gulf Pipe Line Co. | 856,291 | 27,622 |
| Texas Pipe Line Co. | 465,703 | 15,023 |
| Magnolia Petroleum Co. | 667,061 | 21,515 |
| Empire Pipe Line Co. | 926,041 | 29,872 |
| Cosden Pipe Line Co. | 1,270,249 | 40,976 |
| Sinclair P. L. Co. (est.) | 2,325,000 | 75,000 |
| Other lines (est.) | 5,239,000 | 169,000 |
| Total for July | 16,213,345 | 523,008 |
| Total for June | 15,115,263 | 503,842 |
| Difference | 1,098,082 | 19,166 |

**Shipments**

| | | |
|---|---|---|
| Prairie Pipe Line Co. | *4,388,515 | 141,565 |
| Gulf Pipe Line Co. | 922,324 | 29,749 |
| Texas Pipe Line Co. | 655,791 | 21,155 |
| Magnolia Petroleum Co. | 1,192,908 | 38,481 |
| Empire Pipe Line Co. | 932,706 | 30,088 |
| Cosden Pipe Line Co. | 1,202,106 | 38,778 |
| Sinclair Pipe Line Co. | *1,195,380 | 38,560 |
| Other lines | 4,557,060 | 147,000 |
| Total for July | 15,046,630 | 485,376 |
| Total for June | 13,637,023 | 454,567 |
| Difference | 1,409,607 | 20,809 |

*Includes Texas crude.

**Stocks**

| | |
|---|---|
| Prairie Oil & Gas Co. | 23,340,000 |
| Prairie Pipe Line Co. | 2,000,000 |
| The Texas Co. | 6,980,007 |
| Gypsy Oil Co. and Gulf P. L. Co. | 5,523,884 |
| Magnolia Petroleum Co. | 4,384,591 |
| Empire Pipe Line Co. | 1,592,235 |
| Cosden P. L. and Cosden & Co. | 2,134,338 |
| Carter Oil Co. | 16,000,000 |
| Sinclair Crude Oil Purchasing Co. | 21,231,750 |
| Other lines | 3,540,000 |
| Total for July | 86,726,805 |
| Total for June | 84,720,438 |
| Difference | 2,006,367 |

Note—Stocks do not include approximately 4,000,000 bbls. held in storage on private tank farms and leases.

**EASTERN PIPE LINES**

The following table shows the runs and shipments by the various pipe lines in the oil fields of New York, Pennsylvania, West Virginia, Kentucky, Tennessee, Ohio and Indiana:

**Runs—August 1 to 20, Inclusive**

| | |
|---|---|
| National Transit Co. | 150,878 |
| South West Pa. Lines | 58,704 |
| Eureka P. L. Co. | 279,800 |
| Buckeye P. L. Co. (Lima) | 79,898 |
| Buckeye P. L. Co. (Macksburg) | 149,840 |
| Cumberland P. L. Co. | 227,622 |
| Indiana P. L. Co. | 10,346 |
| New York Transit Co. | 10,285 |
| Tide Water Pipe Line (Pa. oil) | 93,495 |
| Tide Water Pipe Line (Ill. oil) | 15,848 |
| Total | 1,076,716 |
| Average runs | 53,826 |

**Shipments—August 1 to 21, Inclusive**

| | |
|---|---|
| National Transit Co. | 358,800 |
| South West Pa. Lines | 181,215 |
| Eureka P. L. Co. | 65,233 |
| Buckeye P. L. Co. (Lima) | 97,494 |
| Buckeye P. L. Co. (Macksburg) | 215,998 |
| Cumberland P. L. Co. | 63,558 |
| Indiana P. L. Co. | 10,072 |
| New York Transit Co. | 9,716 |
| Tide Water Pipe Line (Pa. oil) | 245,650 |
| Total | 1,247,736 |
| Average shipments | 59,415 |

**Runs From Wells**

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

| | June, 1922 | July, 1922 |
|---|---|---|
| National Transit | 211,910.93 | 208,592.00 |
| S. W. Pa. P. L. | 96,192.55 | 94,169,17 |
| Eureka P. L. | 560,269.22 | 419,743.51 |
| Buckeye Pipe Line (Macksburg) | 264,257.83 | 255,688.23 |
| Buckeye Pipe Line (Cleveland) | 28,634.94 | 27,141.48 |
| Buckeye Pipe Line (Lima, etc.) | 116,227.50 | 116,950.91 |
| Indiana P. L. | 21,824.82 | 19,824.95 |
| Cumberland P. L. | 347,345.33 | 353,736.46 |
| New York Transit. | 16,198.65 | 14,818.63 |
| Tide Water P. L. | 115,239.25 | 147,476.39 |
| Pure Oil P. L. | 192,195.68 | 191,120.85 |
| Emery P. L. | 34,490.16 | 34,135.89 |
| Paragon Refining | 32,517.42 | 47,117.20 |
| Indian Refining | 184,379.29 | 396,570.74 |
| Pittsburgh P. L. | 11,615.43 | 10,953.09 |
| Riggs R. & P. | 15,500.00 | |
| Old Dom. Trans. | | 31,425.31 |
| Total | 2,285,799.00 | 2,369,495.01 |
| Daily average | 76,193.30 | 76,435.32 |

Note.—Indian Refining Co. also reported other receipts of 95,108.18 bbls. Paragon Refining Co. had other receipts of 92,248.63 bbls. Pittsburgh Pipe Line has other receipts of 5,064.84 bbls.

**Petroleum Deliveries**

The following table exhibits the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for June and July:

| | June, 1922 | July, 1922 |
|---|---|---|
| National Transit | 544,456.41 | 484,862.16 |
| S. W. Pa. P. L. | 273,427.34 | 263,443.37 |
| Eureka P. L. | 11,487.20 | 119,302.12 |
| Buckeye Pipe Line (Macksburg) | 67,066.45 | 84,097.33 |
| Buckeye Pipe Line (Cleveland) | 1,650.77 | 1,924.68 |
| Buckeye Pipe Line (Lima, etc.) | 822,846.62 | 776,163.79 |
| Indiana P. L. | 750,528.89 | 775,495.04 |
| Cumberland P. L. | 90,036.51 | 99,591.76 |
| Southern P. L. | 111,445.45 | 116,710.53 |
| Crescent P. L. | 134,073.26 | 152,855.67 |
| New York Transit | 250,152.49 | 252,731.58 |
| Northern P. L. | 48,027.32 | 70,862.90 |
| Tide Water P. L. | 133,143.59 | 110,160.54 |
| Pure Oil P. L. | 167,793.89 | 220,593.22 |
| Emery P. L. | 37,356.82 | 34,430.78 |
| Paragon Refining | 106,121.15 | 159,603.44 |
| Indian Refining | 446,934.67 | 501,933.41 |
| Pittsburgh P. L. | 11,485.50 | 16,797.07 |
| Riggs R. & P. | 14,200.00 | |
| Old Dom. Trans. | | 32,460.35 |
| Total | 4,129,134.24 | 4,274,019.79 |
| Daily average | 137,637.81 | 137,871.60 |

**Gross Stocks**

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of June and July are as follows:

| | June, 1922 | July, 1922 |
|---|---|---|
| National Transit | 1,149,051.00 | 1,173,859.33 |
| S. W. Pa. P. L. | 722,699.20 | 787,305.02 |
| Eureka P. L. | 2,054,878.02 | 1,902,308.36 |
| Buckeye Pipe Line (Macksburg) | 611,364.73 | 604,197.72 |
| Buckeye Pipe Line (Cleveland) | 34,740.92 | 27,015.73 |
| Buckeye Pipe Line (Lima, etc.) | 5,632,818.51 | 5,716,130.92 |
| Indiana P. L. | 807,884.29 | 783,933.96 |
| Cumberland P. L. | 546,726.57 | 563,986.85 |
| Southern P. L. | 919,360.08 | 922,681.55 |
| Crescent P. L. | 98,593.55 | 91,778.15 |
| New York Transit. | 2,420,318.64 | 2,363,172.46 |
| Northern P. L. | 1,100,176.94 | 1,058,159.63 |
| Pure Oil P. L. | 337,543.16 | 304,352.19 |
| Emery P. L. | 3,713.26 | 5,200.14 |
| Paragon Refining | 172,451.08 | 175,304.66 |
| Indian Refining | 184,379.29 | 171,121.39 |
| Pittsburgh P. L. | 8,469.33 | 7,937.56 |
| Swiss P. L. Co. | | |
| Riggs R. & P. | 5,000.00 | |
| Old Dom. Trans. | | 10,840.36 |
| Total | 16,810,168.58 | 16,669,285.98 |
| Decrease | 138,793.09 | 140,882.60 |

**Grades of Oil**

The following table shows the amount of the different grades of oil held by the Eastern pipe lines at the close of June and July, showing the gross stocks of the above fields:

| | June, 1922 | July, 1922 |
|---|---|---|
| Pennsylvania | 3,697,840.83 | 3,535,692.35 |
| Lima | 1,127,958.73 | 984,275.63 |
| Kentucky | 1,786,617.36 | 1,917,759.56 |
| Mid-Continent | 10,072,880.95 | 10,137,033.57 |
| Illinois | 124,870.71 | 94,524.87 |
| Total | 16,810,168.58 | 16,669,285.98 |

**Daily Average Runs**

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

| | 1919 | 1920 | 1921 | 1922 |
|---|---|---|---|---|
| January | 66,775 | 56,004 | 64,460 | 67,702 |
| February | 60,581 | 68,699 | 70,054 | 75,096 |
| March | 67,473 | 67,745 | 63,555 | 73,531 |
| April | 72,851 | 64,589 | 65,036 | 75,462 |
| May | 70,047 | 63,937 | 65,466 | 77,592 |
| June | 74,823 | 68,750 | 62,438 | 76,193 |
| July | 71,711 | 66,489 | 59,486 | 76,435 |
| August | 65,370 | 63,861 | 64,885 | |
| September | 68,649 | 68,102 | 60,110 | |
| October | 67,625 | 65,066 | 57,688 | |
| November | 60,131 | 62,758 | 58,470 | |
| December | 64,123 | 60,975 | 61,000 | |

**Daily Average Shipments**

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

| | 1919 | 1920 | 1921 | 1922 |
|---|---|---|---|---|
| January | 100,241 | 98,835 | 115,550 | 119,702 |
| February | 108,432 | 107,146 | 96,736 | 111,362 |
| March | 114,748 | 110,777 | 84,168 | 127,753 |
| April | 112,327 | 114,090 | 101,015 | 127,068 |
| May | 117,508 | 110,219 | 100,253 | 127,840 |
| June | 104,185 | 102,598 | 105,037 | 137,638 |
| July | 125,074 | 112,340 | 97,096 | 137,872 |
| August | 124,352 | 122,296 | 101,652 | |
| September | 118,772 | 127,131 | 117,440 | |
| October | 134,829 | 122,891 | 105,728 | |
| November | 138,576 | 117,730 | 121,803 | |
| December | 124,183 | 117,201 | 104,023 | |

**Gross Stocks**

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

| | 1920 | 1921 | 1922 |
|---|---|---|---|
| January | 8,172,639 | 7,916,353 | 16,297,858 |
| February | 8,186,983 | 8,721,878 | 17,009,293 |
| March | 8,678,899 | 9,818,766 | 16,877,937 |
| April | 8,032,578 | 10,369,941 | 16,777,842 |
| May | 8,391,646 | 11,224,694 | 16,948,962 |
| June | 8,013,874 | 12,328,126 | 16,810,169 |
| July | 8,138,687 | 13,798,698 | 16,669,286 |
| August | 8,249,230 | 15,155,633 | |
| September | 8,180,977 | 15,525,750 | |
| October | 7,925,059 | 15,761,079 | |
| November | 7,760,060 | 14,971,071 | |
| December | 7,864,207 | 15,854,741 | |

**Franklin Pipe Line Co.**

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

| | Receipts | Shipments | Stocks |
|---|---|---|---|
| 1921— | | | |
| July | 2,996.26 | ..... | 19,813.47 |
| August | 2,286.64 | 1,942.08 | 21,158.03 |
| September | 3,106.94 | 4,906.82 | 19,359.15 |
| October | 3,136.90 | 7,316.30 | 15,179.75 |
| November | 2,987.08 | 5,091.15 | 13,075.69 |
| December | 3,066.89 | 501.42 | 15,641.16 |
| 1922— | | | |
| January | 2,389.82 | 33.62 | 17,997.36 |
| February | 2,873.48 | 700.17 | 20,170.67 |
| March | 3,101.87 | 2,262.24 | 21,010.30 |
| April | 3,494.48 | 3,037.62 | 21,467.16 |
| May | 3,100.08 | 2,412.95 | 22,154.89 |
| June | 3,554.83 | 759.81 | 24,949.91 |
| July | 3,044.26 | 2,638.75 | 25,355.42 |

**The Illinois Field**

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

| | Bbls. |
|---|---|
| Gross stocks, August 1 | 2,538,864.42 |
| Runs from wells | 588,151.76 |
| Other receipts | 98,840.27 |
| Regular deliveries | 148,195.22 |
| Other deliveries | 474,708.52 |

**Summary of Statement Made August 10, 1922, Relating to Business of Various Pipe Lines for Month Ending July 31, 1922**

| | Gross Stocks | Runs From Wells | Other Receipts | Regular Deliveries | Other Deliveries |
|---|---|---|---|---|---|
| National Transit | 1,173,859.33 | 208,592.00 | 1,110,892.66 | 484,862.16 | 809,273.33 |
| S. W. Pa. Pipe Line | 787,305.02 | 94,169.17 | 893,594.16 | 263,443.37 | 661,457.77 |
| Eureka Pipe Line | 1,902,308.36 | 419,743.51 | 572,577.32 | 119,302.12 | 1,305,284.50 |
| Buckeye P. L. (Macksburg) | 604,197.72 | 255,688.23 | 2,954.42 | $4,097.38 | 182,471.34 |
| Buckeye P. L. (Lima, etc.) | 5,716,130.92 | 116,950.91 | 2,070,249.94 | 776,163.79 | 1,349,540.12 |
| Buckeye P. L. (Cleveland) | 27,015.73 | 27,141.48 | ..... | 1,924.68 | 32,590.97 |
| Indiana Pipe Line | 783,933.96 | 19,824.95 | 2,340,433.17 | 775,495.04 | 1,604,502.89 |
| Cumberland Pipe Line | 563,986.85 | 353,736.46 | 214.44 | 99,591.76 | 244,020.65 |
| Southern Pipe Line | 922,681.55 | ..... | 566,790.18 | 116,710.53 | 443,341.94 |
| Crescent Pipe Line | 91,778.15 | ..... | 145,239.38 | 152,855.67 | ..... |
| New York Transit | 2,363,172.46 | 14,848.63 | 620,004.74 | 252,731.58 | 437,885.45 |
| Northern Pipe Line | 1,058,159.63 | ..... | 877,778.60 | 70,862.90 | 840,464.76 |
| Total, July 31 | 15,994,529.68 | 1,510,695.30 | 9,200,729.03 | 3,198,040.98 | 7,641,233.72 |
| Total, June 30 | 16,098,612.46 | 1,662,861.77 | 9,205,495.31 | 3,212,198.62 | 7,841,058.80 |
| Difference | 104,082.78 | 152,166.43 | 4,766.28 | 14,157.64 | 199,825.08 |

The amount of Illinois oil run by the Tide Water Pipe Line Co. in July was 31,926.53 bbls., and the deliveries were 104,099.76 bbls. Adding these figures to those of the Illinois Pipe Line Co., makes the runs and deliveries from the Illinois field as follows:

| | Runs | Deliveries |
|---|---|---|
| 1921— | | |
| July | 638,519.43 | 149,230.73 |
| August | 677,854.99 | 217,258.91 |
| September | 637,274.26 | 129,195.53 |
| October | 609,482.01 | 309,750.68 |
| November | 598,449.53 | 229,992.87 |
| December | 599,776.54 | 199,767.01 |
| 1922— | | |
| January | 574,553.30 | 254,255.46 |
| February | 524,851.42 | 204,800.70 |
| March | 656,056.93 | 203,163.01 |
| April | 619,793.89 | 195,739.14 |
| May | 655,541.93 | 347,445.42 |
| June | 633,448.20 | 441,541.49 |
| July | 620,079.29 | 252,294.98 |

The Tide Water Pipe Co. (Ltd.) also delivered in July 113,031.41 bbls. of Oklahoma oil. The total deliveries of all grades by the Tide Water were 327,291.71 bbls.

## *Priority Order Offset By Strike Conditions*

The service order No. 24 of the Interstate Commerce Commission, which became effective last week, placing gasoline, kerosene, gas oil and fuel oil on the priority list on lines west of the Mississippi River along with food stuffs, coal and perishable goods, will not aid shipments of petroleum products in the Mid-Continent section to any great extent, according to opinions expressed by the traffic heads of refineries and marketing concerns in Tulsa. Traffic heads say the rail situation has reached such a deplorable condition that nothing short of a settlement of the strike or the employment of sufficient shopmen to place the motive and rolling stock of the rail lines in pre-strike operating condition, will materially relieve the situation.

It is said that the railroads have shown an inclination to do all they could to aid petroleum shipments previous to the priority order and this, together with the fact that the general situation is becoming worse instead of better, according to traffic men, has led to the conclusion that conditions will not improve. Refineries and marketing concerns for several weeks have had men out over the rail lines looking after car movements and it is probable that they are accomplishing all that it is possible to do under present conditions. In substantiation of this view, local rail officials, when told about the priority order, have declared that they were already moving all the tank cars they could, taking into consideration there are other shipments on the priority list which must also be considered.

Division heads of the railroads in the Mid-Continent section, however, continue to express more optimistic views regarding the rail situation. They say that within a week or two the priority order will result in a distinct improvement in the movement of tank cars. The fact that the coal strike has been settled and that a few more men are being employed weekly to take the place of the striking shopmen, will aid the condition. At least two of the major lines operating in the Southwest have said their service has been hampered since the strike due to the long distances which they have been compelled to haul coal, both for their use and other industries, classed as essentials. They declare that with the mines opening again and others they will be able to purchase coal close to where needed and they will thus have more motive power available for general traffic. One of the larger lines is generally credited with saving the situation in the Mid-Continent section. This line has been able to continue an efficient service for the petroleum shipments handling not only its normal trade, but a large part of that which other lines have been compelled to refuse.

### GETTING GASSERS NEAR HOWARD, ELK COUNTY, KANS.

HOWARD, Kans., Aug. 31.—Port Fleeger, of Wichita, Tuesday drilled in a 5,000,000-foot gas well on the Encill lease in Section 26-29-6, Elk County. The top of the sand was found at 1,455 feet, and it was entered 12 feet. There is no water. This insures Howard an abundance of gas. The well is not far from the original Encill gasser, and is about 7 miles northwest of Howard.

Oliver No. 2, in the northwest of the southeast of 17-29-10, near the Heck gasser, is reported to have been drilled in for a 5,000,000-foot gasser.

Blaxter and Mitchell have brought in their No. 5 Kyser, in the east half of the northeast quarter of 9-30-9, in the Hyre Pool, west of Howard. The well looks like an average pool well.

Marshall and LaDow, on the Kitterman, in 10-30-12, got a 3,000,000-foot gas well at 1,600 feet. This is the fourth good gasser in Section 10.

The gas and oil business has been a big factor for Howard, causing it to get an ice plant, an up-to-date water and sewer system, high line for electricity and a good bunch of new buildings in one year. The Howard people are strong for the oil and gas men.

### MONTANA FIELD NEWS

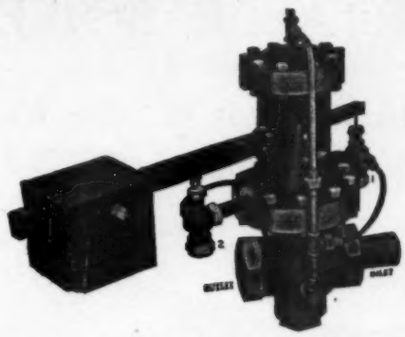
BILLINGS, Mont., Aug. 31.—Lauzier-Wolcotts Bulletin says: Investors of Fargo, N. Dak., headed by A. B. England, will drill a test well on 15-35, Snow Ball Dome, Garfield County.

The well on the Mosby Consolidated, in the Cat Creek Field, is down close to 1,600 feet, according to last reports.

Gordon Campbell-Kevin Syndicate No. 1 expects to drill four wells on four different sections in 35-2w, Kevin Field.

Peerless Oil producers, headed by Kragrund and Landhiem, of Winnet, will take over the old Republic well on Section 28-16-28, Brush Creek, Fergus County. The well is now 1,300 feet deep, and will be carried at least 400 feet further.


**The Fulton Gas Relief Valve for Natural Gas Gasoline Plants**



In the manufacture of gasoline from natural gas, during the process of treatment, the gas is raised to a high pressure by means of a multi-stage compressor, and when the gasoline has been extracted from the quantity under treatment, it becomes necessary to remove the residuum gas still under high pressure, by discharging it into the atmosphere, or into a closed receptacle, or system of pipes from which it can be saved and utilized. For this purpose the Fulton Gas Relief Valve has been designed, and is so constructed that when the compression has reached the stage, or limit of pressure at which all the gasoline will be removed from the gas under treatment, the relief valve will open and permit the treated gas to escape, while a fresh supply of untreated gas flows in to take its place.

The usual practice is to compress the gas to some point between 200 and 300 pounds to the square inch. When this point has been determined, the weights on the lever can be adjusted so that the valve will then blow. The valve will blow until the pressure falls 20 to 25 pounds, or until all the treated gas has escaped.

The period of blowing can be made longer or shorter by means of the tappet screw on lever which touches the stem of the exhaust pilot valve.

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**PITTSBURGH, PA.**

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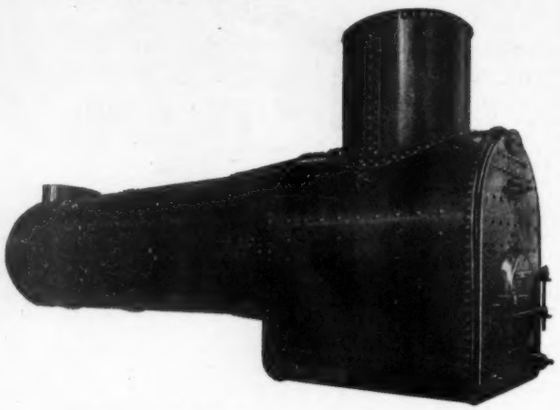

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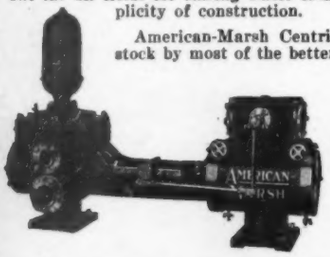
American-Marsh Centrifugal Circulating Pumps are carried in stock by most of the better class of supply houses.



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**BATTLE CREEK, MICH.**



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# Smothers Fire

**FOAMITE-CHILDS CORPORATION Utica. N. Y.**
Sales and Engineering Representatives in the Leading Cities of the World


## SUMMARY OF AUGUST FIELD OPERATIONS

(Continued from Page 16)

gion, which number 396 against 418 last month and a very large percentage of even those carried as drilling are idle temporarily. Three less rigs are standing.

No change in credit balance prices have been made during the month under review.

All but 150 bbls. listed under the miscellaneous is credited to the Webb-Zapata Counties, where there is much work despite the low price for that product and the difficulty in finding market for it. The districts have two very large gas wells during August, both being over 45,000,000 cubic feet.

### NORTH LOUISIANA-SOUTH ARKANSAS

**Summary of Field Operations**

| District— | Comp. | Prod. | Dry | Gs. | Rg. | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Bellevue | 18 | 1,605 | 4 | 0 | 6 | 13 | 19 |
| Caddo | 9 | 260 | 3 | 0 | 5 | 52 | 57 |
| De Soto | 3 | 165 | 1 | 0 | 4 | 8 | 12 |
| Eldorado | 28 | 2,085 | 6 | 5 | 55 | 81 | 136 |
| Haynesville | 83 | 8,855 | 6 | 0 | 9 | 81 | 90 |
| Red River | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| La. wildcats | 22 | 285 | 9 | 8 | 9 | 68 | 77 |
| Ark. wildcats | 12 | 435 | 9 | 0 | 17 | 68 | 85 |
| Total, Aug. | 175 | 13,690 | 38 | 13 | 105 | 372 | 477 |
| Total, July | 170 | 17,980 | 27 | 4 | 127 | 415 | 542 |
| Difference | 5 | 4,290 | 11 | 9 | 22 | 43 | 65 |

Analysis of the summary of operations on the north Louisiana and south Arkansas districts for the month in review indicates a decided tendency toward lower production as has been suggested by the reports of the preceding months. While the August report shows only a slight increase in the number of completions over that of the preceding month it has decided importance when it is seen that, nothwithstanding the increase, the total new production of oil was decreased nearly 25 per cent and with approximately the same number of completions as in June failed to measure up to that month's production by much less than a half. The good showing made by the Bellevue district in July was considerably scaled down, there having been 4 failures out of 18 completions. However, the average per well was favorably maintained.

There is much in the situation in the Haynesville district to indicate a probability of withholding the completion of much new production for better marketing conditions.

### PENNSYLVANIA FIELDS

**Summary of Completed Work**

| Fields— | Comp. | Prod. | Dry | Gas |
|---|---|---|---|---|
| Allegany | 30 | 70 | 3 | 3 |
| Bradford | 101 | 234 | 0 | 0 |
| Middle Field | 41 | 2,049 | 2 | 3 |
| Venango-Clarion | 75 | 103 | 8 | 9 |
| Butler-Armstrong | 25 | 41 | 8 | 3 |
| S. W. Pennsylvania | 36 | 91 | 8 | 13 |
| West Virginia | 93 | 389 | 24 | 31 |
| Southeast Ohio | 97 | 830 | 29 | 9 |
| Total, August | 506 | 3,807 | 82 | 71 |
| Total, July | 461 | 3,158 | 78 | 44 |
| Difference | 45 | 649 | 4 | 27 |

**Summary of New Operations**

| Field— | Rigs | Dry | Total |
|---|---|---|---|
| Allegany | 17 | 22 | 39 |
| Bradford | 19 | 58 | 77 |
| Middle Field | 2 | 22 | 24 |
| Venango-Clarion | 9 | 55 | 64 |
| Butler-Armstrong | 12 | 24 | 36 |
| S. W. Pennsylvania | 35 | 65 | 100 |
| West Virginia | 89 | 111 | 200 |
| Southeastern Ohio | 48 | 107 | 155 |
| Total, August | 231 | 464 | 695 |
| Total, July | 227 | 469 | 696 |
| Difference | 4 | 5 | 1 |

The wells completed in New York and the counties of McKean, Warren, Elk, Forest, Venango, Clarion, Jefferson and Butler in Pennsylvania during August aggregated 280, an increase of 57 compared with the July totals and one of the largest totals that has been recorded for this district in many months. The initial daily output credited to these wells was 2,497 bbls., or 1,282 bbls. more than the preceding month. There were 21 dry holes, a decrease of 4, and 18 gas wells, a gain of 14.

The report for the month brings out two outstanding facts—the large number of completions reported from the Bradford Field, which exceeded those from Wyoming, Montana, Utah and east central Texas combined, and the manner in which the Tidioute Field is holding up. The Middle Field, in which the Tidioute area is located, completed 41 wells during the month and their initial production is given at 2,049. This is all the more remarkable when it is considered that at the start of the year in this field the completions numbered less than 10 as a rule and the initial production seldom exceeded 1 bbl. The number of completions in the Bradford Field was 101 with initial production given as 234 bbls.

At the close of the month, there were 240 rigs and drilling wells under way in this section, a decrease of 7 when compared with the total for one month previous.

### LIMA FIELD

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Wood | 14 | 209 | 1 | 0 | 13 | 13 |
| Hancock | 7 | 153 | 0 | 0 | 15 | 15 |
| Allen | 8 | 213 | 0 | 0 | 12 | 12 |
| Auglaize | 4 | 13 | 3 | 1 | 13 | 14 |
| Sandusky | 8 | 79 | 0 | 0 | 7 | 7 |
| Mercer | 6 | 27 | 3 | 0 | 5 | 5 |
| Van Wert | 7 | 50 | 3 | 0 | 10 | 10 |
| Seneca | 2 | 35 | 0 | 0 | 1 | 1 |
| Lucas | 0 | 0 | 0 | 0 | 1 | 1 |
| Ottawa | 7 | 43 | 0 | 0 | 7 | 7 |
| Darke | 2 | 125 | 0 | 0 | 2 | 2 |
| Henry | 2 | 0 | 2 | 0 | 0 | 0 |
| Logan | 1 | 0 | 1 | 0 | 0 | 0 |
| Michigan | 0 | 0 | 0 | 0 | 1 | 1 |
| Total, August | 67 | 945 | 12 | 1 | 87 | 88 |
| Total, July | 58 | 845 | 3 | 0 | 79 | 79 |
| Difference | 9 | 100 | 9 | 1 | 8 | 9 |

In the Lima Fields, in Ohio, August shows 67 completions, with 1 gas well, 11 dry holes and an initial production of 945 bbls. Compared with the July figures this shows an increase of 9 in completed wells, 9 in dry holes and 100 bbls. in new production.

At the close of August one rig and 87 wells drilling were recorder against 79 drilling wells at the close of July, a net gain of 9 in new work.

There were 23 old wells abandoned during August, against 8 for July.

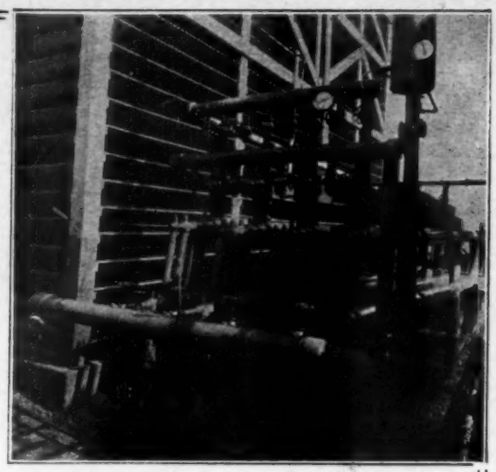
### CENTRAL OHIO

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gs. | Rg. | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Licking | 2 | 0 | 0 | 2 | 1 | 3 | 3 |
| Fairfield | 1 | 0 | 0 | 1 | 1 | 3 | 4 |
| Knox | 39 | 97 | 7 | 5 | 11 | 30 | 41 |
| Ashland | 8 | 5 | 4 | 3 | 3 | 2 | 5 |
| Medina | 16 | 10 | 5 | 8 | 14 | 34 | 48 |
| Lorain | 12 | 0 | 12 | 0 | 0 | 5 | 5 |
| Wayne | 11 | 65 | 2 | 5 | 12 | 13 | 25 |
| Richland | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Vinton | 2 | 0 | 1 | 1 | 6 | 0 | 6 |
| Perry | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Hocking | 0 | 0 | 0 | 0 | 5 | 6 | 11 |
| Holmes | 12 | 0 | 5 | 7 | 5 | 20 | 25 |
| Jackson | 1 | 0 | 1 | 0 | 1 | 4 | 5 |
| Cochocton | 1 | 5 | 0 | 0 | 1 | 0 | 1 |
| Athens | 1 | 0 | 1 | 0 | 4 | 4 | 8 |
| Meigs | 1 | 0 | 1 | 0 | 1 | 3 | 4 |
| Total, Aug. | 107 | 182 | 39 | 32 | 66 | 127 | 193 |
| Total, July | 51 | 91 | 7 | 20 | 79 | 118 | 197 |
| Difference | 56 | 91 | 32 | 12 | 13 | 9 | 4 |

The central Ohio field showed a remarkable increase in completed work during August, as the gas companies were busy drilling in defined as well as wildcat fields and meeting with fairly good results. Territory in the outlying districts away from old production is developing better wells. The big increase in completed wells was in Knox, Medina, Lorain, Wayne and Holmes Counties, although the dozen wells drilled in Lorain County were all rank failures.

# Hildebrand Patent Heat Exchanger



The Hildebrand Patent Heat Exchanger, of which we have exclusive control, consists of seven or more pipes, ranging from 1¼" to 8" diameter, nested into each other and bent into an elongated "U" shape. Welded cross connections permit of a continuous, counter-current circulation of hot and cold oil alternating, beginning with the hot oil in the outside channel.

This Heat Exchanger has a very high coefficient of heat-transfer, and is used in the Hope Gasoline Recovery Plants.

This is only one of many devices invented and perfected by us in our 15 years of active service in the Natural Gas and Petroleum Industries.

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Our holdings in this area form practically a solid block on all sides of the well. Well-known operators are showing their keen interest and faith in this well by buying leases from us in this block. The log is running true to survey. Our drillers have brought in quantities of oil at 1,100 feet. This agrees with the survey and indicates the probability that much larger quantities will be found as we approach the 2,000-foot line. Here is a chance for oil men, operators and others to get good acreage on government structure at a very reasonable figure.

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**Don't Delay—Act Now!**

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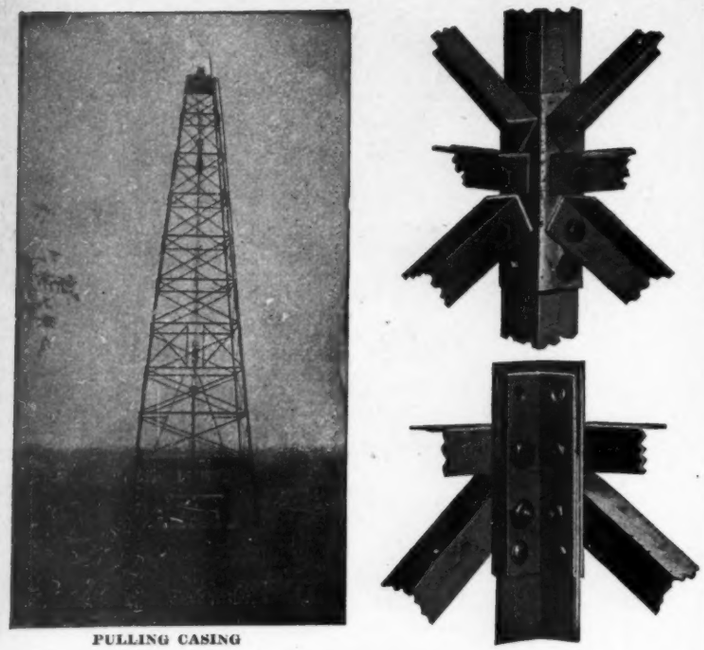

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but were drilled for shallow Mecca-Belden oil and not gas, and the entire number cost less than one deep test, as the work was done with light drilling machines which can almost rig up and drill two wells each week. During August a total of 97 wells were reported completed, of which 38 were dry holes, 32 were gas wells and 36 were oil wells with a production of 182 bbls. When compared with the July figures this shows an increase of 46 in completed wells, 31 more dry holes, 12 more gas wells and 12 more oil wells, and an increase of 92 bbls. in new production. The best oil well for the month was a 30-bbl. producer found by the Ohio Oil Co., in the pool a few miles southeast of Wooster, in Wayne County, in the Clinton limestone formation.

At the close of August there were 66 rigs up and building and 127 wells drilling, a total of 198. At the close of July there were 79 rigs up and 118 wells drilling, a net decrease of 4 in new work.

## INDIANA

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Jay | 8 | 37 | 1 | 0 | 11 | 11 |
| Adams | 0 | 0 | 0 | 0 | 1 | 1 |
| Grant | 1 | 10 | 0 | 0 | 1 | 1 |
| Huntington | 3 | 50 | 0 | 0 | 3 | 3 |
| Delaware | 0 | 0 | 0 | 0 | 3 | 3 |
| Randolph | 2 | 23 | 0 | 0 | 4 | 4 |
| Gibson | 1 | 0 | 1 | 0 | 7 | 7 |
| Pike | 3 | 172 | 0 | 0 | 6 | 6 |
| Sullivan | 1 | 0 | 1 | 0 | 1 | 1 |
| Wabash | 0 | 0 | 0 | 0 | 1 | 1 |
| Knox | 0 | 0 | 0 | 0 | 2 | 2 |
| Wayne | 0 | 0 | 0 | 0 | 1 | 1 |
| Warrick | 0 | 0 | 0 | 0 | 1 | 1 |
| Vigo | 0 | 0 | 0 | 0 | 1 | 1 |
| Total, August | 19 | 292 | 3 | 0 | 43 | 43 |
| Total, July | 27 | 415 | 7 | 1 | 40 | 41 |
| Difference | 8 | 123 | 4 | 1 | 3 | 2 |

Indiana did not make a very good showing in August, having but 19 completed wells, 2 dry holes, 1 gas well and a new production of 292 bbls. This when compared with the July figures shows 8 less completions, 4 fewer dry holes and gas wells, and 123 bbls. less production. The best production in the fields of southwestern Indiana was centered in Logan Township, Pike County, while in the old fields of the central eastern part of the State, Huntington County, supplied the best for that field.

An increase of 2 wells drilling is shown.

## KENTUCKY-TENNESSEE

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Gs. | Rg. | Dlg. | Ttl. |
|---|---|---|---|---|---|---|---|
| Wayne | 14 | 46 | 5 | 2 | 0 | 30 | 30 |
| McCreary | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Wolfe | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Powell | 1 | 5 | 0 | 0 | 0 | 1 | 1 |
| Estill | 2 | 5 | 0 | 0 | 0 | 4 | 4 |
| Lee | 7 | 120 | 1 | 0 | 0 | 5 | 5 |
| Lawrence | 1 | 40 | 0 | 0 | 1 | 15 | 16 |
| Allen | 62 | 1,617 | 14 | 0 | 0 | 72 | 73 |
| Warren | 50 | 1,086 | 9 | 0 | 0 | 81 | 81 |
| Barren | 9 | 86 | 2 | 1 | 0 | 9 | 9 |
| Simpson | 13 | 72 | 6 | 1 | 0 | 18 | 18 |
| Logan | 1 | 0 | 1 | 0 | 0 | 7 | 7 |
| Johnson and Magoffin | 31 | 320 | 0 | 4 | 3 | 56 | 64 |
| Cumberland | 0 | 0 | 0 | 0 | 0 | 28 | 28 |
| Butler | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| Edmonson | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| Ohio | 2 | 15 | 0 | 0 | 0 | 3 | 3 |
| Hancock | 1 | 20 | 0 | 0 | 0 | 10 | 10 |
| Metcalf | 1 | 0 | 1 | 0 | 0 | 7 | 7 |
| Clinton | 1 | 10 | 0 | 0 | 0 | 7 | 7 |
| Breckenridge | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| McLean | 0 | 0 | 0 | 0 | 0 | 5 | 5 |
| Breathitt | 1 | 10 | 0 | 0 | 0 | 0 | 0 |
| Monroe | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Daviess | 1 | 20 | 0 | 0 | 0 | 3 | 3 |
| Henderson | 1 | 0 | 1 | 0 | 0 | 2 | 2 |
| Knott | 0 | 0 | 0 | 0 | 2 | 2 | 4 |
| Fulton | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Whitley | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Marion | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Todd | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Russell | 1 | 6 | 0 | 0 | 0 | 4 | 4 |
| Tennessee | 5 | 15 | 2 | 0 | 0 | 14 | 14 |
| Mississippi | 0 | 0 | 0 | 0 | 0 | 13 | 13 |
| Green | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Elliott | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Caldwell | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| Whitley | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| Meade | 1 | 5 | 0 | 0 | 0 | 0 | 0 |
| Taylor | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Total, Aug. | 214 | 3,498 | 45 | 13 | 11 | 410 | 421 |
| Total, July | 175 | 2,114 | 22 | 3 | 12 | 413 | 425 |
| Difference | 39 | 1,384 | 23 | 10 | 1 | 3 | 4 |

The Kentucky-Tennessee fields made a good showing for August, with a nice increase in completed work and production, there being a total of 214 wells completed, with 45 dry holes, 13 gas wells and a new production of 3,498 bbls. When compared with July, the figures show an increase of 39 in completed wells, 23 in dry holes, 10 gas wells and 1,384 bbls. increase in new production. Allen county recorded an increase, having more completions than any other county in Kentucky for the month and a larger new production, having passed Warren county, which is second and Johnson-Magoffin third in completed work. The best producer that was found during the month in Allen County was H. A. Kiser and others' No. 15 J. I. Shelton, with a flush production of around 600 bbls., and reported making 200 bbls. at the close. In Warren County good wells were few and far between. In the northeastern part of Barren County, one of the best gas wells completed in Kentucky for years was brought in on the Strader farm, near Hiseville, and estimated better than 7,500,000 cubic feet at a very shallow depth, possibly 800 feet. Johnson-Magoffin Counties are not getting large wells, but the drilling in of a few of them means much addition to the average runs of the field, for the wells are lasting ones.

A slight decrease is noticeable in new work, but so slight that it does not mean much, for at the close of August there were 11 rigs up and 410 drilling wells in Kentucky, Tennessee and Mississippi, while the close of July showed 12 rigs and 413 drilling wells in the same territory, which is a decrease of only 4 .

## ILLINOIS

**Summary of Field Operations**

| County— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Clark | 2 | 3 | 1 | 0 | 5 | 5 |
| Cumberland | 0 | 0 | 0 | 0 | 3 | 3 |
| Crawford | 6 | 103 | 0 | 0 | 6 | 6 |
| Lawrence | 0 | 0 | 0 | 0 | 1 | 1 |
| Marion | 19 | 453 | 0 | 0 | 11 | 11 |
| Monroe | 4 | 30 | 0 | 0 | 5 | 5 |
| Washington | 0 | 0 | 0 | 0 | 2 | 2 |
| Alexander | 0 | 0 | 0 | 0 | 1 | 1 |
| Macon | 0 | 0 | 0 | 0 | 2 | 2 |
| Clay | 0 | 0 | 0 | 0 | 1 | 1 |
| Jackson | 0 | 0 | 0 | 0 | 1 | 1 |
| Montgomery | 1 | 0 | 0 | 0 | 0 | 0 |
| Total, August | 32 | 589 | 1 | 0 | 38 | 38 |
| Total, July | 32 | 626 | 6 | 0 | 36 | 36 |
| Difference | 0 | 37 | 5 | 0 | 2 | 2 |

The Illinois Field for August just held its own in new completions, but showed a slight falling off in new production and a few less dry holes, which is encouraging to the operator. During August there were 32 completions, with 1 dry

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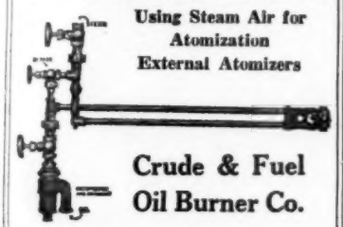

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hole and a new production of 589 bbls., a decrease in new production of 37 bbls. and 5 less dry holes. Four wells were abandoned during the month in Crawford County.

The close of August shows 38 wells drilling, against 36 for July, a net increase of 2. The bulk of the work is centered in the Centralia Pool, in Marion County, the Waterloo Pool, in Monroe County, and some work is doing in Crawford County.

### WYOMING

**Summary of Field Operations**

| District— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Big Muddy | 1 | 10 | 0 | 2 | 18 | 20 |
| Salt Creek | 18 | 11,735 | 0 | 110 | 141 | 251 |
| Lance Creek | 1 | 15 | 0 | 1 | 9 | 10 |
| Warm Springs, Grass Creek, etc. | 2 | 0 | 2 | 3 | 23 | 26 |
| Big Horn Basin | 4 | 55 | 1 | 7 | 29 | 36 |
| Lost Soldier, Ferris, etc. | 3 | 0 | 3 | 21 | 54 | 75 |
| Rock River | 2 | 150 | 0 | 11 | 44 | 55 |
| Fremont County | 2 | 210 | 0 | 21 | 36 | 57 |
| Mule Creek | 0 | 0 | 0 | 3 | 15 | 18 |
| Osage | 1 | 100 | 0 | 7 | 44 | 51 |
| Natrona County | 0 | 0 | 0 | 4 | 18 | 22 |
| Lincoln County | 0 | 0 | 0 | 2 | 20 | 22 |
| Miscellaneous | 0 | 0 | 0 | 14 | 63 | 77 |
| Total, August | 34 | 12,275 | 6 | 206 | 514 | 720 |
| Total, July | 49 | 13,047 | 4 | 199 | 496 | 695 |
| Difference | 15 | 772 | 2 | 7 | 18 | 25 |

**Montana**

| District— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Cat Creek | 6 | 2,700 | 0 | 3 | 36 | 39 |
| Miscellaneous | 9 | 225 | 4 | 13 | 123 | 136 |
| Total, August | 15 | 2,925 | 4 | 16 | 159 | 175 |
| Total, July | 6 | 1,100 | 1 | 15 | 156 | 171 |
| Difference | 9 | 1,825 | 3 | 1 | 3 | 4 |

**Utah**

| District— | Comp. | Prod. | Dry | Rig | Dlg. | Ttl. |
|---|---|---|---|---|---|---|
| Miscellaneous | 1 | 0 | 1 | 0 | 21 | 21 |
| Total July | 1 | 0 | 1 | 0 | 28 | 28 |
| Difference | 0 | 0 | 0 | 0 | 7 | 7 |

There was a falling off in completed work and in initial production in Wyoming in July, while Montana shows a gain in each. Utah had no results. Thirty-four wells were finished in Wyoming, with initial production of 12,275 bbls. Six wells were dry. In July the record was 49 completions, 13,047 bbls. in new production, and 4 dry holes. This indicates a loss of 15 in completions; a falling off of 722 bbls. in initial production, and 2 fewer dusters. In new work the rigs numbered 206 and the wells drilling 514, a total of 720, while at the close of the July report the rigs were 199 in number and the drilling wells 496, a total of 695.

In Montana the completions were 15 in number; initial production 2,925 bbls.; dry holes 4. In July Montana's completions numbered 6, initial production 1,100 bbls., and dry holes 1. Sixteen rigs were up and 159 wells drilling at the close of August, a gain of 1 rig and 3 drilling wells, a total gain of 4.

With the exception of a dry hole and 6 abandonments of drilling operations, there were no results in Utah. There were 21 drilling wells in the state at the close of the August report.

### PURCHASING AGENTS HONOR MEMBER WHO LEAVES TULSA

Unanimous regret was expressed last week by members of the Purchasing Agents' Association, at Tulsa, Okla., because of the departure of J. R. Stockton, purchaser for the Producers & Refiners Corporation, to the Chicago office of the company. Mr. Stockton was president of the Tulsa association, and one of the most widely known purchasing agents of the Mid-Continent section. As a charter member of the Tulsa organization, he had always been actively identified with all its activities and was in no small way responsible for its rapid growth.

He was not only active in the work of the Tulsa association, but was prominent in the activities of the national organization. As chairman of the Standardization Committee, Mr. Stockton prepared the campaign for standardized rig irons and brought about its accomplishment. Mr. Stockton was the guest of the association at luncheon Tuesday, August 29, when he was presented with a hand hammered desk set.


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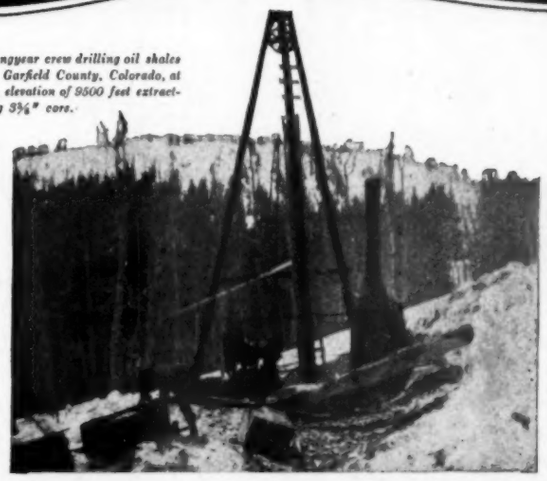

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### PLANET AND GLADIOLUS SETTLE THEIR DISPUTE

WICHITA FALLS, Tex., Sept. 2.—Settlment of the boundary dispute case of the Planet Petroleum Co. and the Gladiolus Oil Co. has been effected, according to an announcement by company officials here, the former company paying the latter $175,000 for title to a producing tract in the South Electra district. The settlement ends a famous suit tried several months ago in district court here, in which the Gladiolus Co. obtained a judgment against the Planet Petroleum Co. involving title to a producing property valued at that time at $500,000, including impounded oil. The two companies have adjoining leases in the South Electra Pool and the dispute involved the boundary line.

The settlement was made in connection with an agreement involving the sale of the entire holdings of the Planet Petroleum Co. to the Empire Gas & Fuel Co. The sale of the properties will be consummated within a few days. The Gladiolus Co. is a subsidiary of the C. N. Haskell interests.

### ILLINOIS' GOVERNOR FAVORS GASOLINE TAX

QUINCY, Ill., Sept. 4.—Illinois is faced with the possibility of a gasoline tax. Governor Len Small has just announced that he will seek a new road bond issue and a gasoline tax for the proposed extension of 3,500 to 10,000 miles of highways.

The governor has said that he believes a gasoline tax to be sure and fair. He bases his statement on the reasoning that some automobiles are seldom run, perhaps once or twice a week. These cars, as he says, do not get the benefit from the roads that the car does which is run every day of the year.

While the governor believes firmly in the gasoline tax, there is quite a possibility of the matter being deferred until decisions are reached in the courts of other states, where similar taxes are being tested for constitutionality. R.W.S.

### LAUNCH OF A NEW TANKER

LONDON, Aug. 27.—A large oil tank steamer which is being built to the order of the British Tanker Co. (Ltd.), London, has been launched by Swan, Hunter & Wigham Richardson (Ltd.), from their Neptune shipyard, Newcastle-on-Tyne. The vessel has been named the British Gunner. She is designed to carry over 10,000 tons of oil and is about 455 feet in length by 57 feet beam. The propelling machinery will consist of a set of turbines of the Metropolitan-Vickers-Rateau type, with double-reduction gearing of the three-box floating frame type, steam being supplied by three large boilers fitted with Howden's system of forced draught, and burning oil fuel on the Wallsend-Howden system.

### CAT CREEK SHIPMENTS INCREASE

BILLINGS, Mont., Aug. 31.—During the month of July 199,554 bbls. of oil were transported from the Cat Creek Field to Winnett, setting a new record against the previous record month of August last year, when 160,912 bbls. were transported. During the month over 77,000 bbls. were shipped to the Standard, of Indiana, at Whiting, Ind. The Lewistown refinery received 12,815 bbls.; the Weowna refinery, 7,346 bbls.; the Arro refinery received 4,066 bbls.; the Miles City refinery, 5,891, and the Billings refinery, 1,669.

### NEW OIL FIELD DISCOVERED

LONDON, Aug. 28.—Information received here from Portugal states that the Colonial Department announces that an important petroleum field has been discovered between Beira and Chinde in East Africa, close to the Zambesi Railway.


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## *LATE DEVELOPMENTS NEAR STEPHENS, ARK.*

STEPHENS, Ark., Sept. 2.—Haskell, White and others are all ready to spud in a deep test in the Stephens Field, NW SW SE, Section 30-14-20w, Nevada County, which is on the southeast dip of an anticlinal dome.

The Tri-County Oil Co.'s Murphy well, in Section 3-15-20, Nevada County, is down about 2,185 feet in what is believed to be lime caprock.

The Tate & Turley well, in Section 11-15-20, Columbia County, and about 1,000 feet northwest of Poverty No. 1, is down 2,450 feet, in 30 feet of hard sand, with showing of oil.

Jimmie Cox has derrick built complete and all machinery on the ground and will spud in his well in SE SW NE, Section 14-16-20, Columbia County.

Nelson and others, in Section 4-15-20, are drilling at about 1,500 feet.

Ike Watkins, in Section 11-14-21, is making good progress and will soon set 6-inch casing.

Transcontinental Oil Co. is preparing to test at 2,200 feet in Section 5-16-19, Columbia County.

Hude & Aarnes are drilling plug in their No. 2, Section 13-15-20, Columbia County.

Queenan & Wells are preparing to test in Section 25-15-20, Columbia County.

Community Oil Co. has erected derrick on its location south of town, Section 28-15-19, Ouachita County.

Gleason and others are moving onto their location in Section 12-14-20.

The Haskell, Hude & Aarnes and Poverty No. 1 wells are holding up on the pump and delivering oil to the racks through pipe lines. Careful business principles will be employed by experienced drillers and oil men in the Stephens field, to insure the field against salt water.

We will very soon have electric lights, waterworks and other permanent improvements in Stephens. C. C.

## THE COMPANY AVERS THAT DRILLER PARKER WAS SPOOFING

In the issue of July 26, our Canadian correspondent reproduces a letter from W. C. Parker, an Oil Springs, Ont. driller, dated Abadan, Persia, in which Parker relates, with full details, a story of an attack by pirates in the Arabian Sea and of his own and E. Kells' part in it, Kells' too, being a Canadian driller. Along comes a letter from the New York office of the Oil Well Engineering Co., Ltd., a British concern, which says that Mr. Parker was spoofing his friends at home. The writer of it would lead us to believe that Baron Munchausen was a sublime George Washington compared to Mr. Parker.

"After having investigated this matter," the letter of the Oil Well Engineering Co. says, "we now have before us an emphatic official contradiction from the company for which these men proceeded, of the happenings related therein."

Mr. Parker's story, written for the delecation of the home folks, and perhaps not especially meant for publication, was a perfectly good little story. It had punch to it and its details were numerous and exciting, and it is a a pity to spoil it by saying it was not true, but we are bound to play fair with both sides, and we therefore publish this and pass the buck to Brother Parker.

## REFINERY TO OPEN

OKLAHOMA CITY, Okla., Sept. 1.—The Pauline Oil & Refining Co. last week began running crude oil from its wells into its 6,000 barrels of storage at its refinery at Duncan. It has contracted for production from two other concerns, and will begin operating the refinery at 1,000 barrels capacity by September 1. The company has made a location for a test in the southwest of 35-5-8, 2 miles south of Chickasha. W. F. K.

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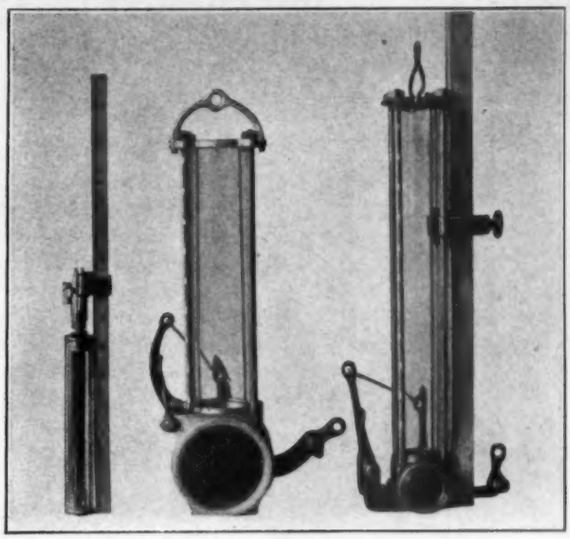

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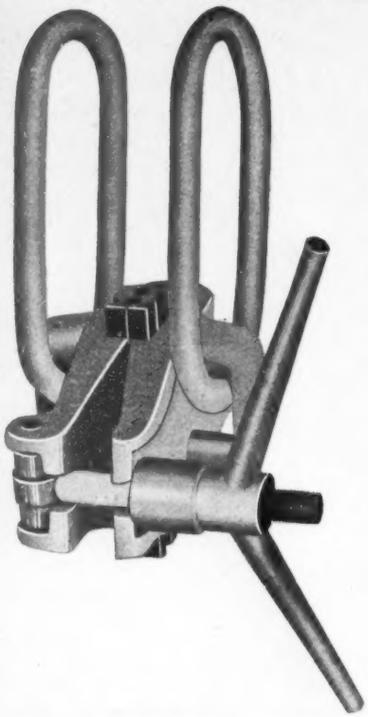

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The Oil and Gas Journal
Tulsa, Okla.


## *No Let Up In Drilling In California Fields*

By CHARLES H. GILMAN

LOS ANGELES, Calif., Sept. 1.—The latest weekly report issued by the State Mining Bureau shows little evidence of any immediate letup in drilling, as 25 new wells were started, seven more than the week before, bringing the total to date since January 1 to 882, as compared with 938 for the same period last year, representing a much larger volume of work during the present year, as a large number of post-hole wells at Conejo were taken into account during the earlier period of 1921, and these had little bearing on the situation.

The report shows nine permits issued for Long Beach, where the most intensive development is under way, these being to the Capital Oil Co., General Petroleum Corporation, Shell Co. (3), Hughes Drilling Co., Calmont Oil Co., Mutual Oil Association and United Oil Co. At Santa Fe Springs, Kirkpatrick Brothers started No. 1 and the B. G. T. Oil Co. skidded the rig from No. 1 after losing more than 3 000 feet of hole and have started anew. The Shell Co. started No. 1 at Redondo and No. 9 on the Columbia lease at Brea Canyon. Only one well was started at Huntington Beach, by the Standard Oil Co. At Richfield, the Union is drilling No. 8; E. R. Carey has started a test in Section 33-4-23, Ventura County, and near the old Summerland Field, at Lookout Park, Santa Barbara County, William T. Tobin was issued permits for drilling two new wells. In the Cat Canyon district, Santa Maria, the Palmer-Union Oil Co. shifted the derrick and started a new hole on No. 7.

Midway reported two, one by the C. C. M. Co., in Section 26-31-22, and Caribou Oil & Mining Co.'s No. 6, in Section 28-31-23, and the Belridge Oil Co.'s No. 15, in Section 34-30-24, Elk Hills.

Sage & Olsen have started a test on the Shoultz ranch, near San Mateo, and also are drilling a test in Township 4-7, in Sonoma County

Tests of water shut off, 29, 10 less than for the previous week, making a total of 1,089 as compared with 1,014 for the same period one year ago. Eight permits were issued for deepening or redrilling and six were reported abandoned. Incidentally, it might be mentioned that abandoned wells, as listed in this report, include "lost holes" as well as those that have become exhausted or dry. The list includes No. 4 Shell at Huntington, No. 1 P. M. B. Syndicate and the B. G. T. No. 1 at Santa Fe Springs; No. 7 of the Palmer-Union at Cat Canyon, all of which have started new holes; No. 3 Whitley Oil Co. at Whittier, and No. 4 Associated Oil Co., in Section 26-31-23, Midway.

### Notes of Interest

Work on the Amalgamated deep test in the old Salt Lake Field is still under way, the depth on Wednesday being 4,352 feet, the nature of formation being granite, gray and muddy, carrying slight indications of oil and gas. It was stated at the well that formations passed through at about 3,000 feet were of sufficient importance to justify a good paying well, but the object in drilling deeper is to discover, if possible, a new and deeper sand.

The rig for the deep test well to be drilled by the Salt Lake Oil Co. some little distance east of the Amalgamated well, is standing and ready to drill, but active work has not yet started.

In the Los Angeles City Field many of the small strippers have been suspended since the cut in prices went into effect, and in some instances where old and abandoned wells were reclaimed and put on production, casing and tubing is being pulled out and disposed of and the wells abandoned, as the owners claim the amount of oil recovered does not pay for the cost of pumping at present prices.


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With $1.60 oil, a number of old wells were put back into commission and made to yield a small profit, but it can't be done at 60 cents.

When market prices were more favorable and there seemed some encouragement for wildcatting, several thousand acres of prospective oil territory lying along the northern border of Los Angeles County were filed upon by different parties with a view to drilling. The lay of the country is extremely mountainous, in many places inaccessible, still a certain amount of work has been started, but the present demoralized condition has caused a general suspension of activities for the time being at least. The territory is designated as the Santa Barbara National Forest. It has favorable indications of oil and numerous seepages are found, while a few miles distant, in Ventura County, a considerable amount of development was carried on at an earlier period when numerous pools of high-grade oil were developed.

At Los Angeles Harbor much activity is under way in the exportation of bulk oil, and from all indications the month of August will witness larger shipments than for any like period in history. During the present week seven tankers were listed to leave port, and three of these pulled out on August 22 and the other four will leave by Saturday. The ships are owned by the Standard, Union and Shell and the various cargoes taken out will help to relieve the present congestion.

The Standard Oil Co. has been awarded a contract to supply the United States Navy with its fuel oil requirements at Cavite, Philippine Islands, being the most successful bidder against the Shell Co. The contract calls for the immediate delivery of 62,000 bbls., which will be transported across the Pacific at once.

The Universal Oil Co. has completed its No. 1 well at Santa Fe Springs, after deepening from a shallower sand to 3,700 feet. It is reported as making 4,500 bbls. a day. The oil is 33 gravity and is coming from the Bell sand, so named on account of the Union's No. 1 on the Bell property, which has continued its present flow of 4,000 bbls. a day for the past several months.

### Storage Problems

The present accumulation of surplus stocks, now rated above 42,000,000 bbls., is causing much anxiety among producers and purchasers in their efforts to furnish storage capacity, while at the same time those who were familiar with the situation seven or eight years ago claim that the amount of actual storage oil on hand was close to 60,000,000 bbls., or, to be more explicit, the Agency figures for April, 1915, show the actual stocks at 59,770,789 bbls., with something like 7,000,000 bbls. additional shut in and classified as "potential production," or oil available should necessity call for that amount.

During the intervening period since 1914 storage capacity has been allowed to deteriorate, many of the large tanks torn down and the immense reservoirs built for temporary use during the flush production period in the San Joaquin Valley fields have been destroyed or allowed to go to decay, and a matter of still greater importance which many do not seem to take into consideration, is the fact that the present great oversupply is confined more exclusively to the southern fields of the State, and were it possible that the former available storage tanks and reservoirs in the north were still available, it would be practically useless in the present emergency for the transportation of oil from the present overflowing districts is utterly impracticable.

Under existing circumstances it would seem that the only recourse left is to build more storage, for there is little indication of any immediate curtailment in drilling, either by the large or smaller companies, and such relief as is afforded under present shipping facilities falls far short of taking care of the surplus.

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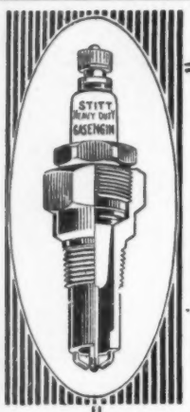


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## *Diamond Drill Test In Grant County, Okla.*

By RALPH T. BAKER

A diamond-core test is now being drilled by the Comar Oil Co. and others on the Smalley farm, northwest quarter of the southeast quarter, Section 13-25-4w, near the town of Salt Fork, Grant County, Oklahoma. Eight and one-quarter inch casing has been cemented at 405 feet, and drilling with a diamond bit may be expected at any time.

The Comar officials expect to make a thorough test of the acreage in this vicinity and at the same time settle the advisability of using core drills for testing deep formations. Some practical oil men question the use of the core drill in drilling for oil, contending that the small hole might not permit the available amount of oil to be recovered.

The men advocating the diamond core drill declare that this criticism may stand, but that the information obtained from the log of the core will be of paramount importance. The Salt Fork well is in strictly wildcat territory and consequently the results obtained as drilling proceeds may be of great importance to Oklahoma operators and all oil men interested in the development of a new drilling system.

Drilling from the surface was accomplished to the present depth by means of a 10-inch fish tail or mud bit. An 8-inch fish tail bit will be used if the formations continue soft below this level, but if substantially hard formations continue, the 8-inch diamond bit will be used and detailed log of the formations will be made from this point.

As the hole is to go 3,500 feet or more, unless oil in paying quantities is found, preparations are being made to use 6⅝-inch casing and the 5⅜-inch pipe. A greater depth may call for the use of 4-inch, inside diameter flush joint pipe. Drill pipe used on the test is 3½-inch flush joint material and the smallest bit contemplated is 3 15-16-inch diamond drill.

While using a 10-inch fish tail bit, it is attached to a 4-inch, 8-thread shank, in turn attached to a 4x10-inch coupling and four feet of 4-inch double strength pipe and is bushed to the drill pipe, or K-rods as they are known in large diamond core work. These rods are seamless tubing, 12½ pounds to the foot, and come in lengths of 10 feet. Joints are flush and threads are four to the inch, square cut.

The diamond bit itself is comparatively small, being a cylinder of varying diameters, only a few inches long. Eight black diamonds, or carbons as they are known by the operators, are set in the lower face of the cylinder, which measures 5-16 inch in thickness. Carbons extend 1-32 inch from the bit and are staggered so that four cut down and outward from the cylinder and the other four cut down and inside the cylinder, thus clearing an unfractured rock core which is pushed within the bit as drilling proceeds.

Top of the bit is threaded and screwed into a core shell six inches long and the same diameter as the bit. The shell is beveled on the inside, with the small diameter at the bottom, and catches the core by means of an inside spring when the rods are pulled. Above the core shell is 2½ feet of spiral fluted guide and above it is the core barrel in 10-foot sections. As many as five sections of core barrel may be used without pulling out. Core barrel is attached to the drill rods.

Top of the drill rods passes through a chuck attached to a drive spindle, with a keyway on the outside to transmit the power. The drive spindle is attached to two 10x40-inch hydraulic cylinders working on a yoke at the top through two sets of cone bearings which take care of the thrust of the machine and the dead weight of the pipe.

Power is transmitted from a countershaft off the main drive shaft of the engine, which is a 40-horsepower, two-cylinder, double-acting, high-speed steam engine. From the counter-shaft the power is transmitted to the drive spindle


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by bevel gearing on the sleeve of the drive spindle and counter-shaft.

Cable for running pipe and tools is wound on the steel drum built on the same base as the engine. About 250 feet of 1-inch 6-19 steel cable is used. A clutch engages or disengages the engine from the hoisting apparatus. When tools are run and in place, water is forced into the cylinders and the chuck is pulled up to the bottom of the cylinders. Drill pipe is then attached to the drive spindle, the water taking the weight of the pipe. Rotation of the pipe is started and water is gradually let out through a pet cock at the bottom of the cylinders. As the water falls, the pipe is let down and the diamonds cut deeper. When the water is exhausted, chuck is released from pipe and cylinders are refilled, chuck is moved upward and a new grip is taken on the pipe. Cylinders hold a 40-inch column of water.

A column of water is kept on the hole by means of a heavy rotary mud-hog, which pumps the fluid in through the rods, circulating it at the bottom and discharging it outside the drill rods at the top of the hole. Protection from gas is assured by a master valve set on top of the 8-inch casing. A nipple is placed on top of the valve and a cross is screwed on top of the nipple. Side openings of the cross are swedged to 4-inch and closed by gates. Top opening is fitted with a packed joint oil saver through which the drill rods are run.

To clean the hole in the event a showing of oil is found, a pump barrel is fitted on the end of the drill rods and lowered to proper depth. It is then worked up and down by means of the hoisting apparatus, having a stroke of 8 or 10 inches.

The engine is a heavy, complete affair, weighing 14 tons. It is set on heavy timbers mounted on the derrick floor. Base of the engine itself measures 8 feet 6 inches by 6 feet.

## *Oklahoman's Views On Wyoming Oil Field*

ARDMORE, Okla., Sept. 2.—Two noticeable features are very apparent in the Salt Creek Field of Wyoming, says Harve Loomis, consulting geologist, of Oklahoma City, well known here, and now in the city on a business visit, in conversation with the oil editor of The Ardmoreite. One of the features is the enormous size of the structure, which covers an area of at least 60 square miles. The other is the completeness of the monopoly which the Standard Oil Co. and its subsidiaries have in the territory.

The producing area of the field at the present time is 18 miles long and from 3 to 5 miles wide. The first Wall Creek sand covers only 10 miles. The second Wall Creek sand is known to cover 60 miles, he states. Another sand, known as the Big Muddy, has been found to exist below the second Wall Creek sand, but has not been defined as yet. The sands range in thickness from 50 to 200 feet and yield oil of 37.5° Baume gravity. The structure is very easily seen. Oil has been known to exist there for more than 30 years. Thirty years ago, P. M. Shannon, of Bradford, Pa., had shallow production at the extreme north end of the Salt Creek structures, which was hauled out in tank wagons. These shallow producing horizons outcrop farther south in the field. The big production which the field is now yielding has been taken out of the ground for about 10 to 12 years. Production from the second Wall Creek sand mounts as high as 10,000 to 12,000 bbls. daily. During the month of April, more than 1,500,000 bbls. was run through the pipe lines out of the field, this figure representing only 30 per cent of the entire field. If all the wells were opened up, Mr. Loomis places a conservative estimate of the production of the field at 200,000 bbls. daily, with only 10 per cent of the pool drilled up.

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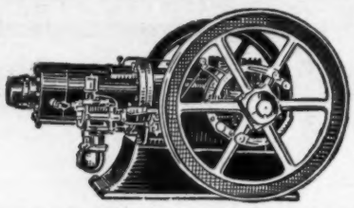

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From the August 3 issue of The Oil and Gas Journal:

TULSA, Okla., August 2.

The most important bit of news that occurred in Oklahoma this week was the report that the Roland Oil Co.'s gusher in Section 2-15-8, Creek County, which when it first came in was credited with being the largest well ever brought in in Oklahoma, has quit flowing. The well was estimated to have begun flowing at the rate of 20,000 bbls. daily and was only 2 months old.

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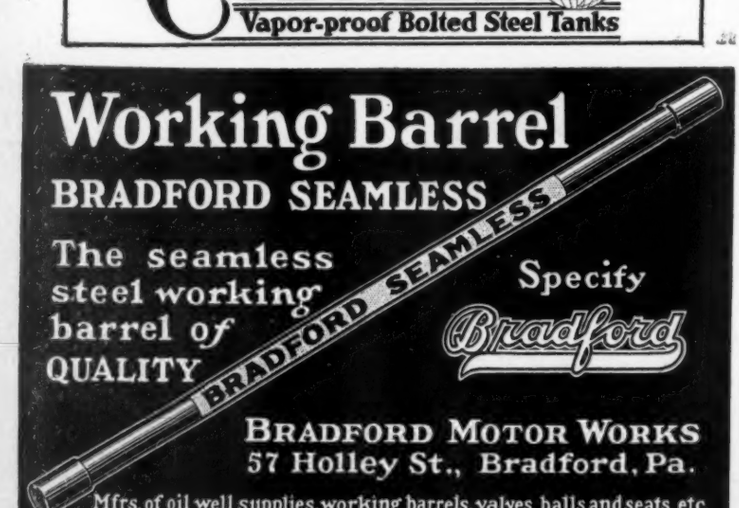


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the Salt Creek structures and covers approximately 10 to 15 square miles.

Three factors are retarding operations in the Salt Creek district. They are transportation, marketing and the water. In fact, similar conditions affect all portions of the wildcat territories of Wyoming. There are several wildcat districts in the State where there are but one or two wells shut in, which are in pay sands, but lack of market has stopped further exploration. One hundred days out of the year all development in Wyoming stops, due to the extreme cold. Pipe lines are always buried eight feet deep for the same reason. Even with this earthen protection, the oil would freeze if an attempt was made to run it during the cold spell. There is no railroad running to the Salt Creek Field, and the nearest city is Casper, which is 40 miles distant, and which is reached by a good wagon road over which trucks haul material at the rate of $1 per 100 pounds. The Midwest Co. controls the water market at the pool and has a line from Casper to the field. The company sells water to independents as well as Standard subsidiaries.

The Salt Creek oil, even though its gravity is 37.5°, is quoted at 70 cents a barrel, due to the monopoly established by the purchasers of the crude. There is only one gasoline plant in the field and only one pipe line. Oil is sold to refineries at Casper, owned by the Standard Oil Co. of Indiana and the Midwest people. Incidentally, the refinery at Casper is the third largest in the world, with a capacity of 60,000 bbls. daily. Seventy-five per cent of the acreage in the Salt Creek structure is owned by the Standard Co. and its subsidiaries. For this reason, development has not been rapid. Great activity appears to be on the edges, where the independents are operating.

The operators of the Salt Creek area are hopefully awaiting the completion of a line which The Texas Co. is now laying from Casper to the field, which will connect with a refinery which The Texas Co. is building at Casper. It is believed that the entry of The Texas Co. as a purchaser in the field will bring up the price of the oil.

"The Salt Creek structure is beyond a doubt the biggest potential oil field in the United States," says Mr. Loomis, "and it will be a factor in the petroleum industry for years to come."

### PIPE LINE IN VENEZUELA FOR THE ROYAL DUTCH-SHELL

It is reliably stated that arrangements are being made by the Royal Dutch-Shell interests for constructing a pipe line from the General Asphalt Co.'s oil fields in the Mene Grande area on the eastern shore of Lake Maracaibo, Venezuela, to deep water. The necessity of building such a pipe line is said to have become more urgent owing to the decreasing production from the Toteco Pool, in Mexico, and the threatened shortage of fuel oil. With light Mexican oil selling at $1.50 and heavy Mexican oil at 90 cents a barrel at Tampico, exclusive of taxes, it is believed such a pipe line will prove advantageous to the company. Another reason given for the construction is that the Royal Dutch Co., which conducts the oil operations of the General Asphalt Co., in Venezuela, is said to be short of oil owing to lost production in Mexico, and is reported to be purchasing oil in the United States to meet contracts with refiners here.

### STANDARD'S NEW REFINERY

NEW YORK, Sept. 1.—The Standard Oil Co. of New York is understood to have completed arrangements for erecting a large refinery at Sparkill, near Piermont, Rockland County, in connection with its expansion program, which also is understood to call for construction of filling stations throughout the State. The refinery, it is said, will be erected upon a 1,500-acre tract of land purchased by the New York company for $2,000,000.

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# CLASSIFIED WANTS

**COPY** must be in our office Friday prior to date of issue. Average 6 words to the line. Cash in advance

### FOR SALE

FOR SALE—For immediate delivery, all makes of rotary drilling rigs complete with 3,000 feet of upset drill pipe, boilers and engines, and several strings extra heavy standard drilling tools. L. M. Bowman, Box 116, Terral, Okla.

FOR SALE—One 38 Star with two strings of too's and one No. 4 gasoline clipper with two strings of tools, both in fine condition, and priced right. Centralia, Ill., Box 175.

TEXAS' most promising oil fields, Mirando, Webb County. Leases, 5 to 80 acres, $5 per acre; Mitchell County, 40 acres, $100 per acre. John Powhatan, 224 E. Houston St., San Antonio, Tex.

FOR SALE—Oil and gas lease on 80 acres in 22-17-5 Lincoln County, 4½ miles south of Cushing, Okla. Running creek. Address C. T. Kvieg, Burlington, Iowa.

FOR SALE—In Pioneer Field, interests in producing and drilling wells, also acreage with production, leases and royalties. C. A. Stevens, Box 501, Pioneer, Texas.

FOR SALE—Gas engine, Alberger, 2 cylinder, tandem type, 125 h. p., for natural or producer gas; perfect condition; can be seen in operation; bargain. Arner Co., Buffalo, N. Y.

FOR SALE.—At bargain prices, oil and gas leases, production and royalties in the Kentuckey shallow fields. For full particulars and maps address W. P. Harley, Bowling Green, Ky.

FOR SALE—Royalty interest in 160 acres in the Bristow district; partly developed. No wells drilled to the deep sand. Address E. K., Box 1629, Tulsa, Okla.

## Oil Books for Sale

THE DERRICK HANDBOOK OF PETROLEUM, Vol. I.—Covering petroleum development from the Drake well, 1859, to 1898. Daily market quotations, tables of runs, shipments and stocks, oil exports, field operations, biographical sketches of all the leaders in the oil field, hundreds of illustrations, 1,200 pages; bound in grain black leather; gilt title. Price, including carriage charge to any place in the United States.....$3.50

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THE OIL AND GAS JOURNAL
Tulsa, Okla.

### FOR SALE

FOR SALE — Kevin-Sunburst Oil Map. Just out. Gives extent of structure in 40-acre tracts, producing wells with locations to date. White or blueprints, 18x24. Price $1. The Holding & Royalty Co., 14 Third St. N., Great Falls, Montana.

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STORAGE TANKS FOR SALE—Two 500-barrel wood storage tanks located in Healdton Field, Glenwood lease, Section 4-4-3. Mail bids to Glenwood Corporation, Keystone, Bldg., Joplin, Mo.

FOR SALE—If you have on hand drilling outfits, boilers, engines or anything useful to the industry that is not in use, don't let it deteriorate—SELL IT. The Oil and Gas Journal want columns will bring you many inquiries.

### TANK CARS FOR SALE

We are offering for sale 50 tank cars, all in good mechanical condition. For complete specifications and others information communicate with the Exchange Trust Company, Trustee, 14 East Third Street, Tulsa, Okla.

OIL FIELD LEGAL BLANKS—Leases, assignments, releases, township plats, gauge books, run tickets, time books, well records, etc. Request on your letter heads gets free catalogue. Olds Press, 215 East Third St., Tulsa, Okla.

### WANTED

WELL WANTED—Make offer to drill on either 80 of SW¼ Section 29-17n-12e, production two sides. Address F. S. Kindley, 918 Walnut St. K. C., Mo.

WANTED—Reliable agents to sell oil and gas leases on Terral-Nocona Anticline in Jefferson County, Oklahoma, three wells now drilling on this structure; two more derricks up, and another moving in. Acreage in 10 acre tracts and upward. Government report and countour maps on application. S. M. Bowman, Terral, Okla.

WANTED—To let contract to drill deep test in Pottawatomie County, near Wanette, Okla. Standard or rotary considered. Room 242 Raymond Bldg., J. A. Davy. Box 1369, Muskogee, Okla.

WANTED: TEST WELL

Will checkboard 9,000 acres for test well. 5 pipe lines through property. Geologists report very favorably. Much activity in this territory now. Exceptional offer to responsible parties for quick action. Chariton Leasing Syndicate, Box 363, Fayette, Missouri.

WANTED—Settled oil production with drilling prospects, Pennsylvania, Ohio, Indiana, Illinois, Kentucky. Must stand rigid investigation. P. O. Box 1053, Pittsburgh, Pa.

WANTED—Brokers and high class salesman to handle oil leases located on good structure, southeast Oklahoma. Two wells drilling. Best oil indications. Box 20, The Oil and Gas Journal.

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SALESMAN WANTED—One experienced in selling fuel oil. Good wages and steady position for right party. Address P. O. Box 1929, Tulsa Okla.

### BUSINESS OPPORTUNITY

WOULD CONSIDER purchase of 1,500 to 3,000-barrel refinery. Advise rock bottom price, terms and location. H. H. Beagle, Hotel Rainbow, Great Falls, Montana.

LEASES and production in field where $500 to $2,000 complete well—Simpson County, Kentucky. C. E. Litteral & Co., Franklin, Kentucky.

PRODUCTION WANTED—An Oil company, now organizing, composed of real operators and well known Kansas City business men, will absorb a small company with production free from debt. The company absorbed will have the opportunity of receiving a greater cash value for their property than they now place on it. Address Box 33, care The Oil and Gas Journal.

LEASE TRANSFER PAYMENTS placed in escrow pending completion our test well on Devine structure, Medina County, Texas, located as recommended in Texas University Bulletin 1860. Now drilling under cash guarantee of completion. If you are willing to pay $5 to $40 per acre for tested leases with prospect of long-life, high-gravity production near excellent market, investigate this right now. Adams, Bitting & Groves, 208 Moore Bldg., San Antonio, Texas.

FREE ON REQUEST—Map of Allen County, Kentucky, showing pools. Greatest shallow oil field in the world. Production on pipe line and leases with wells equipped and unequipped, near pipe line. Splendid opportunity for oil companies or syndicating. Brokers and promotors protected. Lock Box 4, Scottsville, Ky.

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We will buy from owners direct 25 to 100 barrels of settled production for cash. Give full details. No brokers involved on either side. Box No. 12, The Oil and Gas Journal.

RAISE CAPITAL—The successful way through stock and bond salesmen. Write Charles Wesley Barrick, New Martinsville, W. Va. Established, 1880.

KENTUCKY OIL MAP FREE

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GOOD shallow drilling propositions near production. Allen County, Kentucky. Address Box 47, Scottsville, Ky.

### POSITION WANTED

DESIRE connection with responsible company as superintendent; have had 17 years' experience and am very conversant with both rotary and standard tools, also vacuum and have executive ability, age 37. References and details of experience on request. Address Box 30, care The Oil and Gas Journal.

### POSITION WANTED

YOUNG MAN with 10 years' experience in all branches of a complete refinery also construction foreman, wants position as superintendent, assistant superintendent, or construction foreman; prefer plant under construction or just starting to operate. Reference on request. Address Adv. in care The Oil and Gas Journal.

POSITION WANTED by geologist. Technical education plus graduate study in Eastern university. Field experience in Montana-Wyoming, Mid-Continent Fields, northern Mexico and Central America. Fair speaking ability in Spanish. Best of references. Willing to go anywhere. Address Box 34, care The Oil and Gas Journal

WANT connection by October first with legal, land or insurance department of oil company. Qualified and capable of assuming responsibilities and transacting business. Licensed at law, average stenographer and competent bookkeeper. Experience in purchase and production department. Can satisfy any man looking for a real hustler. Best reference from present and past employers. Box 31, care The Oil and Gas Journal.

### $150,000,000 MORTGAGE ON OIL LAND RELEASED

SAN ANTONIO, Tex., Aug. 31.—A $150,000,000 chattel mortgage, believed by veteran employes in the county clerk's office to be the largest ever recorded, has been released to the Empire Gas & Fuel Co. of Delaware and five subsidiary companies by the Equitable Trust Co., of New York, trustees. Bexar County was but one of the 108 counties in Texas and 59 in Kansas and 44 in Oklahoma in which the chattel mortgage was recorded, since the lands mortgaged by the big oil concern to secure a bond issue of about $150,000,000 were located in counties in these three States.

All rents, revenues, issues and profits of the company's huge oil holdings in the Southwest were mortgaged to secure the bond issue and were automatically turned back to the custody of the oil concern when the chattel mortgage was released and sent back to the trust firm.

### IRISH IMPORT RESTRICTIONS

LONDON, Aug. 27.—The Dublin Gazette contains the text of a decree (quoted by the Board of Trade Journal) issued by the Provisional Government of Ireland "to restrict and regulate the importation of certain goods and articles, and to obtain information as to the persons to whom the same are distributed." The decree, which is to have effect until December 6, 1922, unless sooner annulled, prohibits the importation into the area of jurisdiction of the Provisionel Government (sove under the authority and in accordance with the conditions of a permit in that behalf first obtained from the minitser of home affairs in the Provisionel Government) of the following goods and articles, among others: (a) Any petroleum spirit, naphtha, benzol, petroleum, paraffin oil, fuel oil, motor spirit, or other inflammable liquid, or liquid or other substance capable of producing power; (b) any lubricating oil.

### CONSESSION IS SIGNED

LONDON, Aug. 28.—Information received here is to the effect that the Standard Oil concession for the exploitation of oilfields in Czecho-Slovakia has been finally signed and delivered in Paris.

# INDEX TO THE JOURNAL'S ADVERTISERS


A

Acme Fishing Tool Co. ..... 41
Admiral Petroleum Co. .....
Advance Petroleum Corp. .....
Ajax Iron Works .....
American Car & Foundry Co. .....
American Sheet & Tin Plate Co. ... 55
American Steam Pump Co. .....116
American Tank Co. ..... 43
Anderson, Carl B. .....124
Arbon, Paul, Co. .....122
Arnold, Jno. A., & Co. .....124
Associated American Engineers .....120
Associated Petroleum Engineers ....120
Atlas Supply Co. ..... 69

B

Baker Casing Shoe Co. .....102
Barnhart-Davis Co. .....121
Barnickel, Wm. S., & Co. ..... 91
Beaumont Iron Works .....
Becker Co., The .....
Beckner, Lucien .....119
Bell Pump Co. .....
Bessemer Gas Engine Co..... 4
Blackmer Rotary Pump Co. .....120
Black, Sivalls & Bryson, Inc. ..... 23
Blaw-Knox Co. .....
Bradford Motor Works .....126
Bridgeport Machine Co. .....
.....Inside Front Cover
Bristol Co., The .....113
Broderick & Bascom Rope Co. .....105
Brokaw, Dixon, Garner & McKee ..125
Brown & Thomsen .....122
Brown Welding Machine Co.....103
Brownell Co. .....
Buckeye Traction Ditcher Co. .....
Burrell, Geo. A. .....123
Burrell Technical Supply Co. .....
Butler Mfg. Co. ..... 85
Butler Portable Steam Hammer Co. .
Byers, A. M., Co. ..... 5

C

Calorizing Co. .....Inside Back Cover
Capital Abstract & Realty Co. .....126
Carnegie Steel Co. .....
Carson Auto Specialty Co. .....118
Caudill, Samuel J. .....122
Chaplin-Fulton Mfg. Co. .....115
Chapman Valve Mfg. Co. ..... 89
Chicago Bridge & Iron Works .....
Chisholm-Moore Mfg. Co. .....
Clark Bros. Co. ..... 95
Clark, Robert W. .....121
Cochrane, Willrich & Johnson .....123
Columbian Rope Co. .....
Columbian Steel Tank Co. .....126
Connolly, D. F., Agency, Inc. ..... 96
Continental Supply Co. .....
Cook Paint & Varnish Co. .....
Cooper, Bernard .....126
Cooper, C. & G., Co. ..... 79
Cosden & Co. .....
Crandall & Murta .....125
Crane Co. ..... 81
Crude & Fuel Oil Burner Co. .....119
Cummins Working Barrel Co. .....

D

Danciger Oil & Refining Co. .....117
Darling Valve & Mfg. Co. ..... 91
Darnell, James L. .....125
Davenport Mfg. Co. .....
Dawson Towel Supply Co. .....126
Dayton Pipe Coupling Co. ..... 29
Deep Well Engineering Co. .....107
De Laval Separator Co. ..... 33
De La Vergne Machine Co. .....
Delta Electric Co. .....
Diamond Refining Co. .....123
Dickey-Ashby-Fountain Co. .....126
Dodge Mfg. Co. .....
Douglas, James M. .....122
Dresser, S. R. Mfg. Co. ..... 13
Dunn Mfg. Co. .....

E

Eaton, Clayton H. .....120
Emery Mfg. Co. .....118
Empire Refineries, Inc. .....
Equitable Meter Co. .....
Exchange National Bank .....

F

Fairbanks-Morse & Co. ..... 89
Federal Engineering Co. .....123
Fenwick, Reddaway Mfg. Co. ..... 83
First National Bank, Wichita Falls
First National Bank, of Tulsa ..... 7
Fisher Governor Co. .....108
Fohs, F. Julius .....123
Foamite-Childs Corp. .....116
Foos Gas Engine Co. .....
Formica Insulation Co. ..... 61
Foster & Reiter .....126
Fort Worth Laboratories .....119
Foxboro Co., Inc. ..... 90
Freeborn Engineering Co. .....121
Frick-Reid Supply Co. .....21-67
Fulton Iron Works Co. .....

G

Gardner Governor Co. .....
Gaso Pump & Burner Mfg. Co. ..... 84
General Eelectric Co. ..... 6
Gilbert & Barker Mfg. Co. .....
Gomory, W. L. .....121
Goodrich, B. F., Rubber Co. .....119
Goodyear Tire & Rubber Co. .....104
Goulds Mfg. Co. .....
Graver Corp. ..... 93
Great Western Smelting & Refg. Co..121
Griscom-Russell Co. .....107
Guiberson Corp. .....64-65
Gustafson & Spencer, Inc. .....

H

Hazard Mfg. Co. .....
Hancock Working Barrel Co. .....
Harrisburg Pipe & Pipe Bending Co. 75
Heeter, C. M., Sons, Inc. .....122-125
Henry, George W. .....126
Hercules Corp. .....
Herold, Stanley C. .....122
Heydrick Mapping Co. .....120
Hinderliter Tool Co. ..... 45
Homestead Valve Mfg. Co. .....
Hood, H. H. .....122
Hope Engineering & Supply Co...97-113
Hopkins, Edwin B. .....123
Hough, Chas. N., Mfg. Co. .....119
Houston, Fred K. .....125
Holt Mfg. Co. .....
Hughes Tool Co. ...Outside Back Cover
Hughes, V. H. .....125
Huff, J. E. .....126
Huntley & Huntley .....120

I

Illinois Glass Co. .....
Imperial Oil Marketing Co. ..... 49
Indiahoma Refining Co. .....
Indianapolis Blue Print & Supply Co. 122
Industrial Petroleum Corp. .....
Ingersoll-Rand Co. .....
International Derrick & Equip. Co. ..
Interstate Pipe Co. .....

J

Jarecki Mfg. Co. .....
Jeffrey Mfg. Co. .....
Jeffery, W. H., Co. .....118
Jewell, Wm. R. .....122
Johns-Manville, Inc. .....
Johnson & Somers .....124
Jones, S. M., Co. .....

K

Kansas City Hay Press & Tractor Co.
Kansas City Structural Steel Co. ....
Kelly & Jones Co. .....
Kelly-Springfield Tire Co. .....
Kewanee Boiler Co. .....
Kirk & Hoover .....124

L

Lafe Speer Abstract Co. .....126
Larkin & Co. .....
Larkin Packer Co. .....105
Lasky, Bernard H. .....122
Lederer, E. R. .....121
Lewis James O. .....121
Lewis & Lilly .....121
Longyear, E. J., Co. .....119-123
Loomis, Harve .....125
Lorraine Gas & Oil Separator Co. ....101
Lucey Mfg. Corp .....
Lubrite Refining Co. .....117
Ludlow Valve Mfg. Co. .....115
Lufkin Rule Co.....125
Lunkenheimer Co., The ..... 37

M

Magnolia Petroleum Co. .....
Maloney Tank Mfg. Co. ..... 54
Marland Refining Co. ..... 77
Marsh Gauge Pole Co. .....
Matteson, W. G. .....123
Matson, Geo. C. .....125
Metric Metal Works .....
Miller Improved Gas Engine Co. .... 99
Moore & Chandler .....120
Moore, Lee C., & Co., Inc. ..... 1
Multigraphing Shop, The .....126
Munn & Co. .....121
Myers, C. W. .....100

Mc

McGrath, T. S. .....123
McGregor Working Barrel Co. .....
McNutt, V. H. .....123

N

National Lead Co. .....
National Supply Co. .....15-71
National Transit Pump & Mach. Co. 8
National Tube Co. .....2-3
Norris Bros. .....114
North American Car Co. .....

O

O'Brien Steel Construction Co. .....118
Ohio Structural Steel Co. ..... 35
Oil Country Specialties Mfg. Co. ....
Oil Well Improvements Co. .....
Oil Well Supply Co. .....17-73
Oklahoma Tool & Supply Co. ..... 94
Omar Refining Co. .....

P

Page Steel & Wire Co. .....
Parkersburg Machine Co. .....111
Parkersburg Rig & Reel Co. ..... 19
Pawling & Harnischfeger Co. .....
Pennsylvania Tank Car Co. .....
Petroleum Iron Works..... 78
Peterson, Geo. C., Co. .....
Permutit Co., The .....
Pforzheimer, Carl H., Co. .....
Pishel, Max A. .....122
Pittsburgh Meter Co. .....124
Plymouth Cordage Co. ..... 82
Powell, Wm., Co. .....
Producers & Refiners Corp. ..... 80
Pure Oil Co. ..... 57

R

Reavis, H. S. .....121
Reading Iron Co. ..... 31
Reed Roller Bit Co. ..... 86
Reid, Joseph, Gas Engine Co. ..... 93
Republic Iron & Steel Co. ..... 99
Republic Rubber Co. .....
Riter-Conley Co. .....
Rich, John L. .....124
Roots, P. H. & F. M., Co. .....

R

Rossendale-Reddaway Belting & Hose Co. ..... 39
Ross-Meehan Foundries .....
Ruby, Glen M. .....124

S

Safety Pulling Machine Co. .....
Sand Springs Water Co. .....126
Sapulpa Refining Co. .....109
Shaffer Oil & Refining Co. .....
Shaffer Specialty Co. .....
Sharples Specialty Co. .....
Sharpsville Boiler Works .....125
Shaw, E. W. .....121
Sinclair Refining Co. ..... 95
Sistersville Tank & Boiler Works ...116
Sizer Steel Corp. .....
Smith & Miller .....123
Smith, Veleair C. .....125
South Chester Tube Co. .....125
Spence, H. M. .....124
Spencer Petroleum Co. .....119
Stacey Bros. Gas Construction Co. ..126
Stalder, Walter .....123
Standard Engineering Co. .....
Standard Oil Co., of New Jersey ....
Star Drilling Machine Co. ..... 88
Stewart, Irvine E. .....125
Stitt Ignition Co. .....124
St. Louis Pump & Equipment Co. ..52-53
Stover Mfg. & Engine Co. .....126
Sun Co. .....
Superior Tube Co. ..... 25

T

Taxman Refining Co. ..... 92
Tatum, Beverly A. .....125
Texas Co., The .....
Texas Gulf Sulphur Co. .....101
Thomas, J. Elmer .....124
Titusville Iron Works .....111
Tenemec Paint & Oil Co. ..... 51
Todd Shipyards Corp. .....
Tokheim Oil Tank & Pump Co. ....
Trumble Gas Trap Co. ..... 98
Tulsa Ice Co. .....126

U

Union Petroleum Co. .....Front Cover
Union Tool Co. .....
United Iron Works .....

V

Valerius, M. M., Co. .....123
Villars, J. R. .....122
Vogt, Henry, Machine Co. ..... 87

W

Wales Adding Machine Co. .....112
Washburne, C. W. .....123
Weaver & Reynolds .....125
Wells, O. W., & Co. .....120
Westcott Valve Co. ..... 97
Western Bank Supply Co. .....126
Western Machinery Co. .....
Westinghouse Electric & Mfg. Co. ...
Wheaton, A. W., Brass Works .....114
Wheeling Steel Products Co. .....
White Oil Corp. .....
Wickwire-Spencer Steel Corp. .....110
Wiggins Supply Co. .....120
Williamsport Wire Rope Co. .....
Williamsport Wire Rope Dist. Co. .... 47
Williams Tool Corp. .....
Wilson & Bennett Mfg. Co. .....
Wilson & Willard Mfg. Co. ..... 27
Winchester, Dean E. .....122
Wise Machine Co. .....120
Wood & Wood .....124
Worthington Pump & Mach. Corp. ...103
Wright, Harry F. .....121
Wright Mfg. Co. .....120
Wyoming Map & Blue Print Co. ....120

Z

Zoller, L. J. .....124